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EDUCATIONAL PRESS ASSOCIATION OF AMERICA

INTRODUCTION TO EDUCATION

By

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VISITING PROFESSOR OF EDUCATION
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FORMERLY PROFESSOR OF EDUCATION, UNIVERSITY OF CHICAGO

THIS BOOK for introductory courses in education is the outgrowth of the author's own rich experience in the educational field and a thorough analysis of twenty-one textbooks published for use in the introductory course. It has been in preparation for eight years, during which period it has been tried out with some fifteen classes in three universities. It can be said with confidence that this book is more inclusive, more highly organized, and better balanced than any other introductory text in education now available.

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PEABODY JOURNAL OF EDUCATION

VOLUME 12 SEPTEMBER, 1934 NUMBER 2

THE HIGH SCHOOL SCIENCE LIBRARY FOR 1933-34

HANOR A. WEBB
(Editor of *Current Science*)
George Peabody College for Teachers

For the tenth time I have had the opportunity of examining new books in the fields of science published within a twelve-month period, and of estimating the service they might render on the shelves of a junior or senior high school library. The list that follows—like its predecessors[1]—offers certain information and suggestions to school librarians and science teachers.

The *classification* is the same as before, the outline having proved adequate in a broad way. A group of titles has been set apart under a new heading, "Scientific Farming."

The *price groups* follow the plan of the preceding lists; titles in the $10 group add to within a few cents of this amount; in the $25 group are fifteen dollars of titles which *are to be added* to the smaller group to make the total; the $50 group is also an addition of twenty-five dollars; all succeeding price

[1]The preceding lists in this series are:
"The High School Science Library—1910-1924," this Journal, Vol. 3, No. 2, 85-119 (September, 1925). Bound reprint, 25 cents.
"The High School Science Library for 1925" (1925-26), this Journal, Vol. 3, No. 6, 340-347 (May, 1926). Bound reprint, 10 cents.
"The High School Science Library for 1926" (1926-27), this Journal, Vol. 4, No. 6, 351-358 (May, 1927). Bound reprint, 10 cents.
"The High School Science Library for 1928" (1927-28), this Journal, Vol. 5, No. 5 (March, 1928). Bound reprint, 10 cents.
"The High School Science Library for 1928-29," this Journal, Vol. 7, No. 1, 1-16 (July, 1929). Bound reprint, 10 cents.
"The High School Science Library for 1929-30," this Journal, Vol. 8, No. 1, 35-48 (July, 1930). Reprints exhausted.
"The High School Science Library for 1930-31," this Journal, Vol. 9, No. 1, 29-40 (July, 1931). Bound reprint, 10 cents.
"The High School Science Library for 1931-32," this Journal, Vol. 10, No. 1, 20-31 (July, 1932). Bound reprint, 12 cents.
"The High School Science Library for 1932-33," this Journal, Vol. 11, No. 1, 1-10 (July, 1933). Bound reprints, 12 cents.
A. L. A.: American Library Association, 520 N. Michigan Ave., Chicago, Ill.
American Book: American Book Company, 300 Pike St., Cincinnati, Ohio.
American Museum: American Museum of Natural History, Columbus Ave. and 77th St., New York, N. Y.

groups are thus cumulative. In every price group, diversity—a selection from the entire field—has been a chief consideration.

An attempt is made in this list to provide for a certain flexibility in the price-group recommendations. There are libraries that should meet special interests, particularly in connection with special fields—biology, chemistry, home economics, physical education, physics, and others—where enrollments are large and demands abnormal. Of course, such a library ought to have a larger budget, and purchase according to the recommendations of a higher price group; if there are limitations, certain titles must be moved down into a lower price group, and others displaced. The titles which fully deserve inclusion in a lower group when diversity must be sacrificed for special needs are indicated by an asterisk (*).

The position of high school science text books in these lists has been difficult to locate wisely. They are typically excellent, and deserve to be placed in low price groups. There, however, they would displace valuable supplementary titles; in past lists the texts have largely been relegated to the upper price groups on this account. In the present list the texts are not included in any price group, but are published separately. Science teachers frequently obtain these texts out of departmental funds, and keep them on the laboratory shelves; setting them aside in this issue of "The High School Science Library," therefore, seems appropriate.

Each of the modifications mentioned has been suggested by interested librarians, who deserve my thanks. Other constructive criticisms will be indeed welcome.

It may be proper to call special attention to certain texts on the college level that are here recommended as reference volumes for high school classes. Necessarily, these volumes are in the higher price groups—interesting reading on the student's own level should come first—but the value of these more advanced text books is indeed great in their special fields.

Many lines of human activity have slumped greatly during the recent period of economic difficulty. No depression in the quality of authorship or the technique of book-making is apparent, however; neither is there any marked lessening in the number of good books published. As hitherto, there are more good books than money to buy them. As always, this should be a challenge to parents who love their children, boards of education who serve a cultured community, and school executives who decide where the money shall go.

PUBLISHERS AND THEIR ADDRESSES

In the list that follows, publishers are indicated briefly; full names and addresses are here given:

American School: American School Publishing Corporation, 420 Fourth Ave., New York, N. Y.

American Tech.: American Technical Society, Drexel Ave. and 58th St., Chicago, Ill.
Appleton-Century: D. Appleton-Century Co., 35 W. 32d St., New York, N. Y.
Ballou: Robert O. Ballou, 2 West 13th St., New York, N. Y.
Barnes: A. S. Barnes & Co., 67 W. 44th St., New York, N. Y.
Blakiston: P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, Pa.
Carnegie Institution: Carnegie Institution of Washington, 16th and P Sts., N. W., Washington, D. C.
Chemical Education: Journal of Chemical Education, 20th and Northampton Sts., Easton, Pa.
Chicago: University of Chicago Press, 5750 Ellis Ave., Chicago, Ill.
Comstock: Comstock Publishing Co., 124 Roberts Place, Ithaca, N. Y.
Crowell: The Thomas Y. Crowell Co., 393 Fourth Ave., New York, N. Y.
Day: John Day Co., Inc., 386 Fourth Ave., New York, N. Y.
Dutton: E. P. Dutton & Co., 286 Fourth Ave., New York, N. Y.
Field Museum: The Field Museum of Natural History, Grant Park, Chicago, Ill.
Frank: J. O. Frank & Sons, 159 Irving St., Oshkosh. Wis.
Geographical: Geographical Press, Columbia University, New York, N. Y.
Ginn: Ginn & Co., 15 Ashburton Place, Boston, Mass.
Green Lamp: The Green Lamp League, 1026 Fifteenth St., Washington, D. C.
Harcourt: Harcourt, Brace & Co., Inc., 383 Madison Ave., New York, N. Y.
Harper: Harper & Bros., 49 E. 33d St., New York, N. Y.
Harvard: Harvard University Press, Randall Hall, Cambridge, Mass.
Heath: D. C. Heath & Co., 285 Columbus Ave., Boston, Mass.
Henley: The Norman W. Henley Publishing Co., 2 W. 45th St., New York, N. Y.
Holt: Henry Holt & Co., 1 Park Ave., New York, N. Y.
Houghton: Houghton Mifflin Co., 2 Park St., Boston, Mass.
Judd: Orange Judd Publishing Co., Inc., 15 E. 26th St., New York, N. Y.
Knopf: Alfred A. Knopf, Inc., 730 Fifth Ave., New York, N. Y.
Lippincott: J. B. Lippincott Co., 1249 South Wabash Ave., Chicago, Ill.
Liveright: Liveright Publishing Corporation, 31 W. 47th St., New York, N. Y.
Long: Ray Long & Richard R. Smith, Inc., 79 Madison Ave., New York, N. Y.
Lothrop: Lothrop, Lee & Shepard Co., 126 Newbury St., Boston, Mass.
McGraw: McGraw-Hill Book Co., 330 W. 42nd St., New York, N. Y.
Macmillan: The Macmillan Co., 60 Fifth Ave., New York, N. Y.
Meador: Meador Publishing Co., 470 Atlantic Ave., Boston, Mass.
Morrow: William Morrow & Co., 386 Fourth Ave., New York, N. Y.
Norton: W. W. Norton & Co., 70 Fifth Ave., New York, N. Y.
Oxford: Oxford University Press, 114 Fifth Ave., New York, N. Y.
Popular Mech.: Popular Mechanics Press, 200 E. Ontario St., Chicago, Ill.
Putnam: G. P. Putnam's Sons, 2 W. 45th St., New York, N. Y.
Rand: Rand, McNally & Co., 536 S. Clark St., Chicago, Ill.
Sanborn: Benjamin H. Sanborn & Co., 221 East 20th St., Chicago. Ill.
Saunders: W. B. Saunders Co., W. Washington Sq., Philadelphia, Pa.
Science Press: Science Press, Lime and Green Sts., Lancaster, Pa.
Science Service: Science Service, 21st and Constitution Aves., N. W., Washington, D. C.
Scribner: Charles Scribner's Sons, 597 Fifth Ave., New York, N. Y.
Silver: Silver, Burdette & Co., 39 Division St., Newark, N. J.
Sower: Christopher Sower Co., Philadelphia, Pa.
Stanford: Stanford University Press, Stanford University, Calif.
Star Map: Star Map Associates, Alcyone House, Claremont, Calif.
Stokes: Frederick A. Stokes Co., 443 Fourth Ave., New York, N. Y.
Wiley: John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y.
Webster: Webster Publishing Co., 1800 Washington Ave., St. Louis, Mo.
Williams: Williams & Wilkins Co., Mt. Royal and Guilford Aves., Baltimore, Md.
World Book Co., Yonkers-on-Hudson, N. Y.

1933-1934 BOOK LIST, PUBLICATIONS IN SCIENCE

TITLES, AUTHORSHIP, AND RECOMMENDED GROUPS

INTRODUCTIONS TO SCIENCE

THE SPIRIT OF SCIENCE

$10 *Sciencepictures.* By Watson Davis and staff. 96 pp. '33. Science Service.. $0.25
Forty-seven halftones—reprints from "Science News Letter"—with interesting descriptions.

$25 *The Romance of Research.* By L. V. Redman and A. V. H. Mory. x, 149 pp. '33. Williams 1.00
Experimental genius—its past struggles, its present methods, its future possibilities.

So This Is Science! By H. F. Ellis. x, 109 pp. '33. Dutton..... 1.75
Light-hearted ridicule of serious-minded science; gloriously funny—and by a Britisher, too!

$50 *The Gist of Evolution.* By Horatio Hackett Newman. x, 154 pp. '32. Macmillan 1.50
Plainly stating the evidence, also some history of the controversy. For seniors.

Exploring the Earth and Its Life in a Natural History Museum. By James Lindsay McCreary. viii, 262 pp. '33. Stokes..... 1.75
The organized suggestions needed by any student visiting a large museum.

Profitable Company in Literature and Science. By John McLaren McBryde. xviii, 370 pp. '34. American Book..... 2.00
The well-selected science portion presents excerpts from twenty-four illuminating writers.

$100 *The Inventor and His World.* By H. Stafford Hatfield. vi. 269 pp. '33. Dutton 2.40
With special chapters on mechanical, chemical, electrical, biological, and psychological invention; British slant.

Riddles of Science. By J. Arthur Thomson. 387 pp. '32. Liveright..... 3.50
Of great variety, from "why cats come back" to "whence came Man?"

$200 *News Service Bulletin, Vol. II.* Carnegie Institution..... 2.50
Bound volume of 52 illustrated reprints of great scientific variety. Separate bulletins available free to libraries; write for details.

A History of Science. By William Dampier. xxii, 514 pp. '32. Macmillan. 3.00
Emphasizing 19th Century physics and biology, and the New Era in these fields.

Over $200 *The Logic of Science.* By William G. Ballantine. 230 pp. '33. Crowell..... 2.00
Presenting the characteristics of facts, the basis of belief, and the nature of proof.

Number—the Language of Science. By Tobias Dantzig. viii, 261 pp. '33. Macmillan 2.50
Largely history; how mathematical mysteries became principles.

The New Background of Science. By James Jeans. viii, 301 pp. '33. Macmillan 2.50
It comprises the principles of Relativity and Quanta, here thoughtfully explained.

MEN OF SCIENTIFIC ACHIEVEMENT

$100 *Great Men of Science.* By Philipp Lenard. xx. 389 pp. '33. Macmillan.... 3.00
Sixty-five notable personalities revealed, their contributions explained. Sixty-two portraits, many rare indeed.

Over $200 *The Great Physician: Sir William Osler.* By Edith Gittings Reid. viii, 299 pp. '34. Oxford 1.50
A life (1849-1919) that profoundly influenced American medicine.

An Astronomer's Life. By Edwin B. Frost. x, 300 pp. '33. Houghton.... 3.50
Autobiography of Yerkes Observatory's director-emeritus—now blind; stimulating.

GENERAL SCIENCE, PHYSICS, AND CHEMISTRY

$100 **Inside of the Atom.* By John Langdon-Davies. x, 184 pp. '33. Harper.... 2.00
The simplest explanation we have seen of atomic structure and the nature of matter.

The Story of Energy. By Morton Mott-Smith. xii, 306 pp. '34. Appleton-Century 2.00
Chiefly the history and principles of engines, simply explained.

**The Discovery of the Elements.* By Mary Elvira Weeks and F. B. Dains. iv, 363 pp. '33. Chemical Education 2.50
The most complete story of the elements in print, with an extravagant number of rare illustrations and portraits.

$200 ***McDonald's Electrical Dictionary.* By George McDonald. 12, 184 pp. '33 Meador 1.50
Comprehensive alphabetical list, with condensed but accurate definitions, synonyms.

College Physical Science. By Paul McCorkle and J. Arthur Lewis. x, 327 pp. '33. Blakiston 2.00
General science for freshmen; very concise. Helpful high school reference.

Electric Meters. By Richard R. Ranson. 232 pp. '33. American Tech. 2.00
All electric measuring devices, both visual and recording; diagrams, problems.

An Introductory Course in Science for Colleges, Vol. I: Man and the Nature of His Physical Universe. By Frank Covert Jean, Ezra Clarence Harrah, Fred Louis Herman, Samuel Ralph Powers. x, 524 pp. '34. Ginn..... 2.20
General science for freshmen; astronomy, earth science, physical law.

An Introductory Course in Science for Colleges, Vol. II: Man and the Nature of His Biological World. By Frank Covert Jean, Ezra Clarence Harrah, Fred Louis Herman, Samuel Ralph Powers. x, 589 pp. '34. Ginn..... 2.40
General science for freshmen, presenting laws of living organisms.

**Engineer-Custodian's Manual.* By Thomas J. Brett. 185 pp. '34. American Tech. 2.50
Examination questions answered; practical applications for physics classes.

**Electricity.* By John Pilley. xiv, 348 pp. '33. Oxford..... 2.50
Includes electrical structure of matter, radiation from atoms, radio.

**Marvels of Modern Chemistry.* By Beverly L. Clark. xvi, 374 pp. '32. Harper 3.00
Principles—even formulas—mingled with the "marvels" most attractively.

**Out of the Test Tube.* By Harry N. Holmes. x, 373 pp. '34. Long..... 3.00
How the laboratory sciences—chiefly chemistry—underlie civilization; historical, factual, philosophical.

**Electrons at Work.* Charles R. Underhill. xii, 354 pp. '33. McGraw..... 3.00
All the new uses—as "electric eyes," "gas-glow tubes," radio tubes, etc.

**The Universe of Light.* By William Bragg. x, 281 pp. '33. Macmillan.... 3.50
Newest knowledge of light, color, vision; superior reference for physics students.

Over $200 *An Outline of First Year College Chemistry.* By John R. Lewis. 7,258 pp. '33. Barnes 0.75
A new-style text for self instruction; very concise; will help high school seniors.

Atoms and Cosmos: The World of Modern Physics. By Hans Reichenbach. 300 pp. '33. Macmillan..... 2.00
Lucid introduction to the new concepts; meat for best seniors.

**Introductory College Chemistry.* By Horace G. Deming. xii, 590 pp. '33. Wiley 3.00
Excellent high school reference as to facts; many thought questions.

**Principles of General Chemistry.* By Stuart R. Brinkley. xii, 585 pp. '34. Macmillan 3.50
A standard college text brought up to date; helpful high school reference.

The Teaching of Science

$25 *Mystery Experiments and Problems.* By J. O. Frank and Guy J. Barlow. x, 187 pp. '34. Frank $2.25
One hundred twenty-six of 'em, with detailed instructions and—of course—scientific explanations. Stunts for shows and programs.

$100 *An Introduction to the Teaching of Science.* By Elliot R. Downing. viii, 258 pp. '34. Chicago 2.00
Scholarly discussion of objectives, materials, and methods, citing significant studies.

Science Teaching at the Junior and Senior High School Levels. By George W. Hunter. viii, 552 pp. '34. American Book..... 2.50
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Over $200 *The Sound Motion Picture in Science Teaching.* By Philip Justin Rulson. xvi, 236 pp. '33. Harvard..... 2.50
Results of a comprehensive, carefully controlled experiment in numerous science classrooms; pupil achievement increased 20 per cent.

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$10 *Project Making in Elementary Science.* By Grace Fisher Ramsey. 25 pp. '34. American Museum.....$0.15
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The Amateur Machinist. By A. Frederick Collins. xiv, 300 pp. '34. Appleton-Century 2.00
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**Household Equipment.* By Louise J. Peet and Lenore E. Sater. xii, 315 pp. '34. Wiley 2.75
Sixteen practical chapters, with much new information—as on electric ranges.

Henley's 20th Century Book of Formulas, Processes, and Trade Secrets. By Gardner D. Hiscox. xiv, 809 pp. '34. Henley..... 4.00
Ten thousand tested home, laboratory, factory processes; fine for experimenters.

$200 **The Science of Housecraft.* By Agnes L. Stenhouse and E. Stenhouse. viii, 152 pp. '33. Oxford..... 0.95
A British household chemistry—physics; practical, interesting.

Sovereign of the Seas. By Harold T. Bodkin. 71 pp. '33. Popular Mechanics 1.00
Reprints from "Popular Mechanics" on building ship models—particularly the sumptuous "Sovereign of the Seas" of 1637, Charles I.'s pride.

Economic Citizenship. By John A. Lapp and Franklin Ross. viii, 305 pp. '34. Heath 1.16
Many careers are scientific, too! Stimulating, broadening.

Skyscraper. By Elsa H. Naumburg, Clara Lambert, Lucy Sprague Mitchell. 80 pp. '33. Day..... 2.00
A unique mingling of photos, verses, and exposition concerning a great construction.

Inventions, Patents, and Trade-Marks. By Milton Wright. xii, 310 pp. '33. McGraw 2.50
All formalities; stimulating suggestions for new needs.

Over $200 *A Different Story in the History of Life.* Charles Phillip Bloor. 12, 144 pp. '33. Meador 1.50
Autobiography of a paralytic, struggling against odds, who wins a competence.

Basket Pioneering. By O. P. Couch. xvi, 168 pp. '33. Judd..... 2.00
Comprehensive handbook for weaving leaves, stems, needles, shucks, barks, roots; coloring with vegetable dyes.

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$10 *A Forest of the Coal Age.* By B. E. Dahlgren. 39 pp. '33. Field Museum..$0.25
Liberally illustrated bulletin explaining the museum's coal exhibit.

The Drama of Weather. By Napier Shaw. xiv, 269 pp. '33. Macmillan... 1.75
A most unusual weather book with striking diagrams, unexpected analogies, and full appreciation of the layman's curiosity.

$25 *The World of Fossils.* By Carroll Lane Fenton. x, 182 pp. '33. Appleton-Century 2.00
An understandable story of life upon this planet, era by era.

$200 **Principles of Human Geography.* By Ellsworth Huntington, Sumner W. Cushing. xxii, 467 pp. '34. Wiley..... 3.00
Revised edition; extensive, illustrated, excellent high school reference.

Over $200 *Outlines of Physical Geology.* By Chester R. Longwell, Adolph Knopf, Richard R. Flint. vi, 355 pp. '34. Wiley..... 3.00
A "shorter" book, concise, comprehensive; college level, high school reference.

**Economic and Social Geography.* By Ellsworth Huntington, Frank E. Williams, Samuel van Valkenburg. xii, 630 pp. '33. Wiley..... 3.75
How climate and soil make rich or poor communities; new diagrams and maps.

Historical Geology. By Raymond C. Moore. xiv, 673 pp. '33. McGraw... 4.00
Strictly era by era account; illustrated, interpreting rock forms and fossils; comprehensive, excellent physiographic reference.

A Textbook of Geology: Part II—Historical Geology. By Charles Schuchert, Carl O. Dunbar. viii, 551 pp. '33. Wiley..... 4.00
College level, excellent geographic and physiographic reference.

**Geography of North America.* By George J. Miller and Almon E. Parkins. xx, 621 pp. '34. Wiley 4.50
Economic slant; natural assets of the region, and man's use of them; college level, comprehensive high school reference.

EXPLORATION AND TRAVEL

$10 *Travel by Air, Land, and Sea.* By Hanson Hart Webster. viii, 442 pp. '33. Houghton $1.08
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$200 *Stories of Hawaii.* By Ann Schildt French. vi, 314 pp. '33. Houghton.... 1.50
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The Epic of Captain Scott. By Martin Lindsay. 178 pp. '34. Putnam.... 1.50
Dramatic story—chiefly from Scott's diary—of the fateful second discovery of the South Pole.

Over $200 *The Mystery of Black Pearl Island.* By Gunby Hadath. x, 308 pp. '33. Stokes 1.75
A yarn of Pacific adventure, rivaling—possibly—Treasure Island.

**The California Deserts: A Visitor's Handbook.* By Edmund C. Jaeger. x, 207 pp. '33. Stanford 2.00
Scientific descriptions replace prospectors' yarns; topography, weather, plants, animals, aborigines.

Brazilian Adventure. By Peter Fleming. 412 pp. '34. Scribner..... 2.75
High adventures of young Englishmen who tramped 3,000 jungle miles as a lark.

True North. By Elliott Merrick. 353 pp. '33. Scribner..... 2.75
A tired young city man tramps into interior Labrador, and finds health and happiness.

Yachts Under Sail. By Alfred F. Loomis, Gordon C. Aymar. 128 pp. '33. Morrow 3.00
Ninety-three photos of yachts in all weathers—ocean racing featured; dramatic.

Grain Race. By Alan Villiers. viii, 331 pp. '33. Scribner..... 3.00
Vivid diary of an annual (1932) contest between sailing ships carrying wheat from Australia to England.

Manhattan Now and Long Ago. By Lucy Sprague Mitchell, Clara Lambert. xii, 312 pp. '34. Macmillan..... 3.50
Unique exploratory stories of the nation's metropolis.

Jungle Memories. By Henry H. Rusby. xiv, 388 pp. '33. McGraw..... 3.50
A physician's adventures seeking drug materials in South American tropics.

China's Geographic Foundations. By George Babcock Cressey. xviii, 436 pp. '34. McGraw 4.00
Vivid description of struggle for existence with varied natural resources.

FLYING AND FLYERS

$10 *Skycraft.* By Augustus Post. xiv, 294 pp. '33. Oxford..... $1.50
Lively presentation of principles and practices of airships and airplanes.

$50 *The Story of Aircraft.* By Chelsea Fraser. x, 510 pp. '33. Crowell..... 2.50
Comprehensive history, from Icarus to Balbo; services, safety devices, future.

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The first handbook for a transcontinental—New York-San Francisco—airline, explaining physiographic features, describing vegetation, weather, economic activity; something about planes and pilots.

$200 **Heroes of the Air.* By Chelsea Fraser. xxvi, 680 pp. '34. Crowell..... 2.50
History of famous flights up to early 1934; maps, illustrations.

**Complete Model Aircraft Manual.* By Edwin T. Hamilton. xx, 578 pp. '33. Harcourt 3.50
Ten thousand illustrated details of materials and construction; 65 models.

Seaplane Solo. By Francis C. Chichester. 314 pp. '34. Harcourt..... 2.50
A lone airman wrecked on a tiny South Pacific island shows great resourcefulness.

**Airman's World.* By Peter Supf. 224 pp. '32. Morrow..... 3.50
Aerial photographs from all over the world, portraying beauty, majesty, strangeness of land, sea, and sky as only an airman sees it.

COMMUNICATION AND TRANSPORTATION

$50 *Signals and Speech in Electrical Communication.* By John Mills. 281 pp. '34. Harcourt $2.00
Clear but substantial explanation of all the telephone's principles.

**The Ford Models V-8, B, and A Cars.* By Victor W. Page. xvi, 715 pp. '33. Henley 2.50
Detailed instructions for adjustment, running, and repair.

$200 **Radio Construction and Repairing.* By James A. Moyer and John F. Wostrel. x, 444 pp. '33. McGraw 2.50
Quite new, including auto radios, television, and short wave.

Over $200 **Elements of Radio Communication.* By John H. Morecroft. xii, 286 pp. '34. Wiley 3.00
Comprehensive and detailed; moderate mathematics; superior reference.

Principles of Radio. By Keith Henney. xii, 491 pp. '34. Wiley 3.50
Practical guide to "the great adventure of radio engineering."

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$25 *The A B C of the Heavens.* By Ralph Baxter Larkin. 8 pp. '33. Star Map. $1.60
Three 10 x 15 charts—polar, summer, winter skies—with stimulating description, paper bound, $1.00; three charts on cards, 60c. Large, clear.

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Answering boys' and girls' questions concerning suns and worlds; also chapters on "how we found out these things."

$200 **Makers of Astronomy.* By Hector Macpherson. x, 244 pp. '33. Oxford ... 1.50
Brief biographical sketches of many famous star-gazers, including noted Americans; several yet living.

Over $200 *The Expanding Universe.* By Arthur Eddington. viii, 182 pp. '33. Macmillan 2.00
Very modern, tentative conceptions of matter in space; for best seniors.

Creation's Doom. By Disiderius Papp. xii, 287 pp. '34. Appleton-Century. 3.00
Vivid speculation on the future—and end—of this planet; exciting, disturbing, plausible.

LIVING CREATURES OF EARTH

The Living World

$10 *Forty Tons of Coral.* By Roy Waldo Miner. 15 pp. '33. American Museum. $0.10
Illustrating the preparation of the immense coral exhibit.

Diving in Coral Gardens. By Roy Waldo Miner. 18 pp. '33. American Museum 0.15
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THE NEW AMERICAN COLLEGE

JOSEPH BREWER
President, Olivet College, Olivet, Michigan

About twenty-five or thirty years ago, it began to be apparent to some of the shrewder observers in this country that all was not well with higher education in America. Too often the graduates of our colleges and universities seemed to have but little understanding of the world in which they lived; too often they seemed ill equipped to meet the demands of a competitive society with those resources which a college should afford its graduates. Often they did not seem to know enough about the various aspects of the world to be aware of and to understand the implications of their own acts.

It was the consciousness that the colleges were in a sense failing to accomplish their appointed tasks that caused men to question the procedures by which our graduates were trained. The work of Montessori and Froebel in the kindergarten was having far reaching effects on our educational thinking, and the philosophy of experimentalism was beginning to invade a field which previously had withstood the shocks of changing modes of thought. The result was that educators began to seek a better way in the scientific approach. Psychological testing was developed, statistical methods and analyses were employed wholesale throughout the system with many interesting and valuable results. But despite, or perhaps because of, increasing standardization and the infusion of what men thought to be scientific procedure, our colleges continued to turn out graduates who were, as far as one could see, as badly educated as ever. This does not mean that American college education has always been bad, or that there have not always been some good results from it. Even before the great development of the experimental sciences in the last century, some of our institutions and the men in them could have been compared favorably with almost any in the world; and at all times, some men amongst us have managed to learn and to know a great deal despite the system. Nevertheless, college education in general was going through definite doldrums and those in responsible positions were forced to give their attention to the needs of the system.

The application of scientific approaches and procedures was not without its value. It did much to improve the ills of the system, but it failed to accomplish more than a partial cure because educators had not arrived at a clear understanding of the basic trouble. More recently, men like Abraham Flexner have done much to clarify our understanding. Gradually it has been made plain that we have been busily applying quantitative standards and methods to a process in which qualitative values are the only ones of real importance. It was unavoidable of course in building up our system that

we should have given first attention to numbers. The physical buoyancy required to subdue a continent, the material wealth of this country, the rapidity of its expansion, have all left their marks indelibly upon our education with the result that almost any one who cares to has access to some kind of learning. But by clinging to a superficial view of democracy which has led to the consideration of education in terms of groups and averages rather than individuals, by forming the habit of counting, we have almost lost sight of the fact that the ultimate test is weighing. It is in the weighing of results that our system is found sadly wanting. By playing down to the average, American education has achieved wonders in enrollments; but in the meantime, mediocre ability and mediocre training have proved themselves powerless to cope with the problems of a rapidly changing social and economic order. While the usual graduate has perhaps been trained fairly adequately in special skills, the economic disturbances of the last few years have revealed that when opportunities for the practice of those special skills have been curtailed, few were endowed with the deeper intellectual resources with which to make necessary but painful readjustments.

The demand that colleges provide short-cuts to more lucrative jobs, which has in effect created much of our curricula and dictated what the colleges should teach, has resulted in directing our institutions of higher learning into channels where they had no business to go. We turned out every year, thousands who were trained to sell bonds, to advertise commercial products, to apply acquired skills to the problem of existence, and to meet the hazards of competitive life with a technique without a proper foundation of the broad liberal culture which alone could give it meaning. It is only when we come to realize that technique should inform knowledge rather than that knowledge should play the handmaiden to skill, that quality should be the touchstone in all that college does, that the numbers of its graduates has no significance if those graduates have not been trained to take a widely intelligent place in a dynamic world, that we can approach the needs of our educational system with some hope of solving the difficulty.

The method of the production line and the technique of the bargain counter are both adequate to an educational system if the result is to be measured quantitatively. But the attacks made by Flexner and others, and the obvious inadequacies of the system itself, have caused educators to submit the whole problem to renewed investigation. The result has been a necessary restatement of what should be the proper aim of the college. Increasingly, our Junior Colleges and state universities are taking over the functions of higher training schools for the general run of our young people. The professional and graduate schools, of course, go considerably beyond this; the vocational and technical schools provide for those who are capable of a minimum degree of intellectual development beyond the high school level. But those of greater

ability, those who are capable of real education as opposed to training, those who have the capacity to become in a sense men with a profession rather than professional men, have far to seek a place where they can truly learn, where there are no limits set to the amount they can learn and where no impediments are placed in the way of their learning. It is the colleges of liberal arts, and especially the smaller colleges that are admirably suited to provide the conditions in which such men can grow.

But if the college is properly to perform its function of affording an education to the educable rather than a training for the generality of citizens, the college must come to realize its opportunity and attempt to do something besides duplicate in a less effective way the offerings and procedures of the higher training schools. It should be the privilege of the college to take all knowledge once more for its province, to try to see knowledge whole and to concentrate on undergradute and pre-professional education. It should be its function to provide for those capable of profiting by it an opportunity to acquire that body of knowledge which constitutes the minimum furnishings of the civilized mind, the broad basis of liberal culture on which all the specific knowledges and skills must rest. The colleges must make it possible for a student to acquire a unified view of man's knowledge and to discover the bearing of the fields of knowledge upon his own activities; to find out what kind of a world physical and social, economic and cultural, he lives in and what his own place in it is; and to acquire such tools for further learning as he has not already come by.

If the measure of the effectiveness of our education is to be qualitative rather than quantitative, then it will be necessary for us to adopt a new unit in the system, to abandon our attempts to deal with masses and groups of peoples, and to substitute for averages a unique individual human personality as the focus of our efforts, a personality existing in society to be sure and inseparable from it, but none the less a unique individual. To deal with education in terms of groups and averages is to deal with unreal situations, with things that do not exist, and any educational method or system to be realistic and of real value must therefore come to grips with the problems of the different needs, capacities, and desires of individuals. It must adopt a method sufficiently flexible to permit each student to do work adapted to his own needs. He must have freedom to work by himself, for himself, and at his own pace. He should even have, it he wants it, an immunity from teaching. In a word, the system, whatever it be, has got to be made to work for the individual and not *vice versa,* as is now too often the fact. If this is to be achieved, it must be made constantly clear that the function of the whole college is learning, that all who are there are there for that purpose. The responsibility for getting an education must be placed squarely upon the student's shoulders. It must be made clear to him that it is nobody's duty in

the college to teach anyone else anything; that if he has come there, he has come to learn; that the faculty are themselves busy with learning and are there to help him only in so far as he needs and wants help; that no one but himself will benefit by his presence in the college unless and until he has learnt enough to be of help to other learners.

When the college has grasped these basic concepts, that the fundamental unit with which it has to deal is the individual, and that education essentially is not a process of teaching but one of learning, it will have gone far toward a solution of its problem. One of the early signs that a change of ideas and ideals is on the way, was the introduction by Dr. Aydelotte of so-called Honours Work into Swarthmore College in 1922. This work provides for the more gifted students of the college an opportunity to do advanced work independent of the ordinary class routine, in small groups under the direction of special members of the faculty. Variations of this process have been introduced into probably the greater number of our colleges now. As members of the faculties are seeing the advantage accruing from these methods of working, and are learning that intellectual freedom is not really dangerous, the opportunities for more independent work are gradually being extended to whole student bodies. Rollins College, the University of Chicago in its undergraduate department, and Colgate University have probably gone as far as most institutions in the country in this direction. The curricula of most of our colleges have lately been undergoing tremendous changes in the direction of integration, and educational methods in general have been tending toward greater flexibility.

I think it can be truthfully said that nowhere is the tendency better illustrated than in the educational program to be instituted at Olivet College with the beginning of the next academic year. There the four years of the normal college course are to be divided between the Junior Division and the Senior Division of the College. In the two years of the Junior Division, general education will be undertaken in five major fields of knowledge, the physical sciences, the biological sciences, the social sciences, the arts and literature, and philosophy and religion, with advanced continuation work in one of these fields. At the end of the two years, a comprehensive examination will be held for admission into the Senior Division. There advanced and specialized work will be undertaken in one of seven schools: The Physical and Natural Sciences; the Social Sciences; The Languages and Literature; The Fine Arts; Philosophy, Psychology and Religion; Education; and Music. At the end of two years, a comprehensive examination will be set for graduation. The work throughout will be conducted by a combination of lectures, small discussion groups and individual tutorial conferences. As the student progresses through the College, and as he shows himself capable of it, his work will be done more and more independently. Each student will be as-

signed to a special member of the faculty who will act as his particular tutor, and with whom he will plan all his work. The whole process will be kept so flexible that each student can work out a program of study which will best fit his needs, capacities and desires, and he will be free to discover and work at his own best pace, whatever that may be. The quick student will not be held back by the average of the class, nor will the slower student be pressed beyond his capacity to perform.

What we have tried to do at Olivet is to create a medium in which the student will be free to learn at his own best pace, purposively and with really adequate access as an individual to the help and advice of the faculty, and to establish a set of ideals of learning and knowledge which students can strive for rather than a set of minimum standards for graduation. In the end, the program may be summed up in a phrase—that the aim of education should be to afford the student freedom to learn amongst the materials of learning and the encouragement and help to do so significantly. This statement implies of course that the library is once again to become the vital center of the college, for unless the student has access to the materials, he cannot hope to progress. And books are, after all, the basic materials in the undergraduate stage of learning. But learning is a process which requires time and leisure for connected reading and meditation, and the life of the college has got to be so readjusted as to make these things possible.

Where finally the educational process can be conceived of as a co-operative venture in learning in which student and teacher are jointly engaged, where there are no artificial barriers between teacher and taught, where the activities and procedures of the group, since they spring from social needs, are social in their methods, the sanctions and disciplines of civilized societies will have a chance to operate. In such a group, governed by a single objective, learning, and one in which that learning is always related to the present, all its activities will be curricular in the true sense, and all the materials of life in the community, will be made use of to further this end. It is only in this way that the college can become, not just a simulacrum of a civilized community, but a functioning part of the world of our time.

THE TESTING PROGRAM FOR THE GENERAL COLLEGE OF THE STATE TEACHERS COLLEGE, KIRKSVILLE, MISSOURI

C. W. MARTIN
Professor of Education

Most teachers of the past have done a very poor job of measuring the abilities and the accomplishments of their pupils. Certainly it is true that teachers have frequently attempted to present subject matter material to students practically all of which many of the students already knew. This is a waste of time both of the teacher and of the student. Furthermore, this is boresome to those students because there is no challenge and no incentive. They become indolent and inattentive. Many times students accomplish what they set out to accomplish, but they do not receive credit for it because the teacher does not adequately measure what has been done.

Too long our schools have been conducted on the hour-semester-credit plan. By this we mean that if the student stays in the course one semester, there is great likelihood that he will receive a passing grade. If he stays four years, he will likely receive the bachelor's degree. There has been little opportunity for receiving a degree without spending at least four years of time. One hundred twenty credit hours must be on his credit sheet. One hundred fifteen or even one hundred nineteen hours will not do. It has been a matter of piling up credits rather than a question of what the student knows. Why should time have so much to do with the student's ability to do senior college work or graduate work in universities and colleges? Why should it make any difference whether or not he has one hundred twenty hours of college credit or seventy-five hours of college credit if he has the equipment, ability, and the industry to do the work of the graduate schools? Why should the student who has never graduated from high school but has been attending college for two or three years and has made a creditable showing for himself in college work be required to go back and work for two years or more in order to get high school units or credits on the record card to make a total of fifteen or sixteen units? Why should forty semester hours or sixty semester hours be set up as a prerequisite to certain college work? Why should higher educational institutions require high school graduation for entrance? These are questions that have been considered and discussed very much recently. Experimentation is now being carried on in some educational institutions to show whether this matter of credits, hours, and units in education is justified or vicious.

In the General College it is the plan to put the first two years of higher education upon a quality basis rather than upon a quantity basis or time basis.

We hope to be able to say to the student, "When you demonstrate to us that you have achieved up to a certain standard, you may go on to more advanced work no matter what length of time you have spent in accomplishing this." We hope to have students discussing their progress and thinking of their educational standing in terms of what they have learned and what they know rather than in terms of so many credit hours. The testing program for the General College will be one of our best means of finding out what the student knows and whether or not he should go on to more advanced college work, whether or not he can do the regular amount of work in less time and, in general, of giving a complete picture of the student's abilities and accomplishments.

The testing program for the General College will consist of five different phases of work: (1) pre-testing, (2) comprehensive course tests, (3) comprehensive tests covering an entire subject matter field, (4) tests as teaching devices, (5) clinical testing.

The pre-testing program will consist of the giving of general intelligence tests, tests for the purpose of measuring the student's ability in English, tests for measuring arithmetic ability, literary acquaintance tests, a general cultures test, and possibly, in some cases, certain aptitude tests. The results of the Minnesota College Aptitude Test, which was given to all Missouri high school seniors this year, are available and will be used in guiding and assisting entering freshmen. As much of this work will be done before the student enrolls as it is possible to accomplish in order that the counselors may know more about each individual student and can better advise him in the selection of his work in college. Further use will be made of these tests if a student has difficulty later in his college career and when the counselor is attempting to diagnose his difficulties.

The comprehensive course test will attempt to cover completely the field of one particular course. These tests will be primarily objective in nature, not measuring facts alone; but a very earnest attempt will be made to measure the ability to apply facts and information to problem situations. The comprehensive examination must be what its name implies. It must be thorough and searching, and must completely cover the material that the student is expected to come in contact with in that course.

The comprehensive examination covering an entire subject matter field will be very similar in make-up to the one just described but much broader and more thorough. To illustrate the difference between the course comprehensive and the subject matter field comprehensive let us use the subject matter field termed Humanities. In this field we find four courses, namely: World Literature, Art Appreciation, Music Appreciation, and Drama Appreciation. There will be four comprehensive course examinations, one for each

of these subjects, but the subject matter field comprehensive must cover all four courses in the one examination. It is not necessary that a student be in a course before he takes the course examination; neither is it necessary for him to be in any one of the courses before he is permitted to take the subject matter field comprehensive. Here it will be noted that we are attempting to say that it makes no difference to us how, when, or where students gain the knowledge and information which they may have, but our only question is—does the student have the information? Has he reached a certain stage in his development?

Tests that are to be used as teaching devices will probably be short tests, in most cases, of the objective type which the teacher uses just as a class exercise. The teacher may want to give a five-minute test before the period begins as an incentive for further study. Or again, in order to direct and motivate study, the teacher may want to use a very short test at the close of a class period over material which the student has had little or no opportunity to study. At other times the teacher may want to use a twenty, thirty, or fifty-minute test to let the students know how they are progressing in the work up to that point. In this case this would be considered both a teaching device and a measuring device. The testing bureau will have least to do with this section of the testing program, although the director of the testing bureau will be glad to assist in any way possible.

By clinical testing we refer to the procedure which will be used in dealing with those who do not seem to progress well in college work. Students of this type will be invited into the testing laboratory or guidance laboratory and various types of tests will be administered in order to diagnose the difficulties, and suggestions will be offered for remedying those difficulties. The student's past record will be examined, friendly counseling will be carried on, and every possible means will be used to help that student become successful. This will probably be the work of the guidance bureau more than the work of the testing bureau.

As implied above, no student will be required to attend classes any more than he cares to, but neither will any student be given any passing grade without taking the comprehensive examinations. What the student does in class will be largely left to him. If he cares to loaf that is his own business, but he must remember that the passing of the comprehensive examinations must be satisfactorily accomplished before he makes advancement.

It is the plan of the General College to use comprehensive examinations at the beginning of each course and at the close of each course. In this way we are able to tell not only what height of accomplishment the student has reached at the close of the course, but we are able to tell also what has been his span of accomplishment. In order to measure correctly there must be a

point from which to start measuring. We must compute our measurement from one definite point to another. This is true in physical measurements and it is just as true in educational measurements. For example, if a comprehensive examination has five hundred points and is given at the beginning of the course, one student may get absolutely correct only twenty-five points; another may get one hundred fifty points correct. When this is given again at the close of the course, the former student may have one hundred seventy-five points correct and the latter two hundred points correct. In this way the former has made a gain of one hundred fifty points in his fund of knowledge while the latter has gained only fifty points although he stands higher on the test results than the former. The question then can readily be answered as to which of these students deserves more credit. It may be that neither has reached the standard of passing but certainly the one that has made one hundred fifty points gain has accomplished very much more than the other. Furthermore, the counseling and guidance that is to be given to each of these two students should be quite different indeed. To the one praise, encouragement, and hope for the future should be expressed; while to the other it should be pointed out in very clear terms that he has been loafing and wasting his talents and opportunities.

In conclusion, this is a brief description of the plan of measurement to be used in the first two years of this college. This part of the institution is being completely reorganized on the assumption of a new idea of basic college education; that the student should be *educated* rather than credited with sixty semester hours.

INDIVIDUAL DEVELOPMENT THROUGH ART EDUCATION

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Changing society is bringing about new points of view in the matter of educational procedures. Instead of the child being taught *what* to think he is now being guided *how* to think. Courses of study no longer are emphasizing isolated subject matter fields but rather are building curricula of unified material based on life needs and real situations. We have learned that education if it functions in a democracy cannot become static, that it must be a vital, dynamic force and consequently must be progressive in procedure.

This is indeed the day of the individual. "Tolerant understanding and creative self-expression"[1] is the principle of those who believe that the inalienable right of every school child is to live and learn under the drive of his own planning and doing, and that it is essential to give the child freedom to develop his own personality, thereby agreeing with Bertrand Russell, "Reverence for human personality is the beginning of wisdom in every social question, but above all in education."

In our heritage from the past we find that art has always made its greatest progress when it was the direct outgrowth of human needs and emotions, as witness the accomplishments of the ancient Greeks or the Gothic builders. The building of Greek temples, which, in essential characteristics, are the result of basic religious demands and geographical influences, found its apogee in the Parthenon after a period of refinement of proportions and perfection of detail. It was a building of serene vigor, expressing a quiet harmony which was consistent with the Greek ideal of moderation and balance. The Cathedral of Chartres, the epitome of the life and spirit of medieval France, expresses in every bit of masonry, every carved stone, and each beautiful stained glass window the fervent faith and yearning aspiration of the religious beliefs of the period. The enriching influence of art expression in the lives of these people has never been repudiated. So now we expect art education to make life richer through the refinement of emotions and the creation of a keen aesthetic sense. "It is especially the practical side of art that requires more emphasis. We need to put more effort into translating art into the daily life of people. If we could surround ourselves with forms of beauty, the evil things of life would tend to disappear and our moral standards would be raised."[2] Since it is a platitude that "what we want in our nation we must put

[1]Harold Rugg, Ann Shumaker, The Child-Centered School, World Book Co., Yonkers, 1928, p. ix.
[2]Calvin Coolidge. Pamphlet. Practical Drawing Co.

in our schools" it would seem that art education has thus been forced to assume an Herculean responsibility.

The vital position art holds in the elementary curriculum is incontestable. Normal children have natural impulses to express themselves, all they need is the opportunity to spontaneously pour forth their inspirations, dreams, ideals and feelings, usually in the graphic language of art. "The desire to tell something is the motive upon which all good drawing is based; the desire to make something, the motive upon which good construction is based; and the desire to plan, to arrange, to decorate, or to select, the motive upon which design and color are based."[3] All of which is in perfect agreement with the definition that "art is the communication of ecstasy."

The objectives of modern art instruction make adequate provision for these demands for promoting individual growth. No longer is it possible to consider art as a separate subject of instruction, for, in a system of education dealing with life situations art must logically assume a position analogous to that which it holds in the activities of the world at large.

In order to realize how extensively art really influences our daily life one needs but to glance through the daily newspaper. Aside from the news items of particular interest to the archeologist, the art historian or the collector, we find also advertisements appealing to the prospective purchaser's discrimination, based on a knowledge of color, line, form, design, in the selection of clothing, furniture, automobiles and various other necessities of life. Offering merchandise in an "attractive new package" is a favorite line with copy writers. The building page contains articles describing the practical functional form of modern architecture or the mural decorations being painted in some public building. The Woman's Page gives varied advice; how to plant the garden to make it appear attractive; how to arrange flowers harmoniously and pleasingly; how to make the home restful through proper selection of furnishings; how to choose accessories which will harmonize with certain costumes; what types of dresses are suitable for different figures; as well as beauty aids concerning the color harmonies underlying inoffensive make-up. Elsewhere we find notices and critical appraisals of the current exhibits at art galleries and museums; the itinerary for the automobile tourist through regions of natural beauty; the cartoon satirizing the mercenary nation which permits the erection of unsightly billboards and hot dog stands which deface the landscape; the editorial decrying the lack of aesthetics of picnickers who leave a littered spot for the next fellow. An endless list, that of "art in everyday life!" Bonser[4] in his Art Creed states his belief "that the appreciation of beauty in the thousand common things of daily life will result in the final

[3]Grace Sobotka. Art Instruction in the First Six Grades, Edwards Bros. Ann Arbor, 1928, p. 48.

[4]F. G. Bonser. Life Needs and Education, Teachers College, Columbia, 1932. p. xv.

appreciation of beauty as a dissociated ideal." Hence the objectives must conform to the demands of an integrated program of instruction. "The curriculum must conform to the social and modern economic conditions and needs; its content and activities must be evaluated for life interest and life function as a justification for its place in the modern socialized school curriculum."[5]

Broadly speaking the aims of art instruction are:

A. To provide for each individual, (1) A satisfaction of his creative instincts through stimulated imagination, observation, invention, manipulation of tools; (2) The acquisition of "A seeing eye and understanding mind"[6]; (3) The establishment of motor co-ordination and control.

B. To promote the development of sound aesthetic judgment and discrimination to the end that public taste being refined will bring about improvement in homes, communities, public buildings, and commercial products. Winslowe[7] calls this "industrial intelligence."

C. To enrich the pupil's life through acquaintance with beauty in nature and man-created forms, so that he may find enjoyment in aesthetic contemplation. Browning wrote, "If you get simple beauty and naught else you get about the best thing God invents."

Theoretically then the educational, economic and social values of art education are acknowledged, for "Anything which helps to shape one's attitude of mind, one's habits of thinking, one's standards of appreciating, or one's bases of choice has educational value in a degree measured by its influence for good in one or more of these directions."[8]

What of the subject matter of art education in the elementary school? Is it adapting itself to the capacities and needs of the individual child? Is it the result of a definite purpose calling for it? Does it satisfy the individual in a variety of expressions? Is it a means of clarifying ideas for the child? Does it allow freedom of thought? Does it stimulate the imagination? Does it serve as a means of helping the child to adjust himself socially? With these questions as criteria upon which to base judgment let us examine the art content of some activity units in order to be assured that the theories of art education and progressive practices are reciprocal, and that art education is of inestimable value in developing the child into a well rounded social individual.

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[5]Report of the Committee on Elementary School Art, The Federated Council on Art Education, 1926. p. 21.

[6]Wm. G. Whitford. An Introduction to Art Education, Appleton, N. Y., 1929. p. 39.

[7]Leon L. Winslowe. Organization and Teaching of Art, Warwick and York, Baltimore, 1925. p. 23.

[8]F. G. Bonser. Op. cit., p. 71.

The first-grade children[9] were becoming acquainted with Home Life through discussion, story telling, dramatization, music and art. The essential feature of the home in the minds of little children assumes material form, consequently a desire was expressed to "make a house." The first step was investigating and observing methods of building. Houses in the process of construction were visited by the children and reports given to the class. If questions arose which could not be answered further visits and observations were made. Following this orientation period came discussion of plans for their house, where to put it? What materials could be used? What tools are needed? The decision to make the house indoors, in their own home room because of uncertain weather conditions, necessarily limited the size. Lumber for the frame was secured from the "scrap heap" of the college carpenter shop.

Determining the proportions of the foundation frame was an interesting procedure. By means of shifting the planks the group finally came to an amicable decision concerning the proper proportions, and foot measurements came into use. Five feet by eight feet was the size of the base. The foot rule was used as the unit of measure. Committees or working groups were formed at the suggestion of the children resulting from a discussion as to how the work could be feasibly accomplished. Measuring, Sawing and Hammering Committees consequently came into being. To make the upright corner posts six feet high met the approval of the group.

After the rectangular framework was put together mitred braces were made as extra support to the corners. The child who advanced this idea gave a very lucid explanation of why he thought they were essential. Some large (22"x36") pieces of heavy pulp board were found and used for the walls. Several of the children remarked about the resemblance of this material to beaver board. Strips upon which these could be nailed had to be placed before the walls were erected.

By this time the problem of window and door space had presented itself to the children. The location, shape, and number of windows (2) and doors (1) were settled upon by the group, as well as the creation of additional working groups, namely, the Window Committee and Door Committee.

Each child was allowed to work on one committee several days. Posted committee choices, effected through teacher guidance rather than teacher appointment, served also as motivation for practice in reading. As soon as the work of a particular committee was accomplished that group automatically dissolved and the members joined other working forces.

The Window Committee measured and constructed the frames, made an inside window panel of heavy construction paper to which they pasted cello-

[9]The units of work described in this article were carried out in the Campus Training School of State Teachers College, Shippensburg, Pa.

phane panes. (The source of this suggestion was doubtless a miniature Colonial home which was on display at this time, made by the fifth grade, in which windows of this type were used.) This inside panel was then glued to the outer frame.

The Door Committee made the frame for the door, strengthened the corners with mitred braces, covered the frame with pulp board, attached hinges with screws using a screw driver, and created a door knob from a spool!

Throughout all the activities the children commented freely, giving both constructive and unfavorable criticism, concerning the progress of the work in general as well as the efforts of individuals. The desire for group approbation is stimulating to the child. Unsocial tendencies are recognized and changes in attitude effected thereby.

"Our House" just had to have a gabled roof . . . no other type of roof was even mentioned. The great problem confronting the group was—how to make it? The element of safety was the major consideration here, for the children realized the danger involved in building the roof directly upon the frame. Finally one child evolved the idea of making the roof frame in two parts, flat on the floor, nailing the shingles thereon, and then to put the two parts together to "make an A" over the house. So that's how it was done. Old tablet backs made excellent shingles, and were easily tacked into place *after* investigation led to the discovery of the overlapping rainshed feature. The roof was painted slate gray, with tempera paint, by the Painting Committee.

The function of the ridge pole was keenly appreciated by these children after they had successfully erected that trouble-giving member. Adult help was solicited to lift the finished roof into place. Needless to say the occasion was literally that of "raising the roof."

The Chimney Committee did a very fine piece of work in reconstructing a pasteboard carton as a brick flue, which was fastened over the gable of the house.

"What color shall we paint the house?" was the next question that arose. Accordingly a discussion followed concerning the materials of which houses are made as well as the prevailing hue. The color selected for our house was naturally brick red. After the painters had completed one end of the house some one said, "Let's make it look like bricks." Yardsticks and chalk were the mason's tools, and woe betide the artisan who laid a brick in wrong! All woodwork was painted white to "go with the bricks."

Interest was next centered upon the furnishings of the home. Here again individual preference responded to group sentiment in the selection of appropriate articles. They decided to make four chairs, a table, a cupboard, a sofa, a rug, curtains for the windows, and dishes.

Orange crates, brought to school on wagons or by wondering parents, were used by the Furniture Committee for all the furniture except the table. By virtue of much planning, sawing, hammering, sand-papering and painting the completed articles are decidedly useful and a credit to their youthful makers, in the simplicity of design, sturdiness of construction and pleasing color.

The rug was produced through the concerted efforts of several groups, namely, the Loom, Rag Cutting, Sewing and Weaving Committees. The size they wished the rug to be when finished had to be determined before making the loom frame. This was a rectangular frame with tacks arranged in double rows at both ends upon which the cord warp was strung. End wires were attached to the sides to aid in keeping the rug in shape during the weaving process. A loom used previously by the second grade served as a working model in making the frame.

The Rag Cutting Committee judged the suitability of materials for their purpose before cutting them into the desired widths. They found that rags which were cut were better for weaving than torn strips. Members of the Sewing Committee were not only acquiring certain skills in learning to thread a needle, tie knots, sew securely, and fasten thread ends, but also gaining a keen discrimination in the matter of placing together colors which harmonized.

During the weaving process one little girl remarked, "This is just the way my mother darns stockings." Very often the rhythmic chant, "under, over, under, over," was heard from the weavers as they worked.

Dishes were modelled from colored wax. Here again the color sense was developed in the combination of colors used. After the preliminary manipulative curiosity was satisfied the desire to create pleasing shapes was evinced. The decorative element entered when the children discovered that designs could be incised with pencils, sticks or finger nails.

The contribution of a lace curtain by one child necessitated its use in the furnishing of the house. The problems solved here were to determine the proportion of the curtain suitable for the window shape, to measure and cut accurately, to hem the bottom edges, and to make a casing at the top in which to run a drawstring, by means of which the curtains were fastened to the window. This expedient was suggested by one of the children to serve in lieu of a curtain rod.

A fence and bird house were made for the adornment of the yard surrounding the house.

Picture study lessons had valuable motivation in this unit. In order to select wisely the pictures to hang in their house they became familiar with several masterpieces. The children's preferences, stated in their simple language, were intensely interesting as well as illuminating from the standpoint of pure appreciation. They knew why they liked the picture, with no

sham at endeavoring to glibly give dates and facts concerning the artist. In fact, no interest was manifest in the name of the artist, consequently their appreciation was not spoiled through learning inessentials.

Figure study was introduced through the wish to make dolls for the house. Patterns were drafted, cloth cut, sewed and stuffed by each child. The features were marked on the cloth with crayon.

Free graphic expression throughout the unit, at desks, easels, or blackboard consisted largely of subjects relative to the building activity, such as tool shapes, house forms, brick houses, houses with door and windows showing, gabled roofs (drawn in true perspective through the intermediate acquaintance with the house in the room), house with yard and bird house, dish forms, making dishes, dishes with designs, the loom, furniture, dolls, and the inside of the house.

The outcomes of this unit in terms of the mental, economic and cultural aims of art education, as stated previously, can readily be discerned. In the primary grades, emphasis is naturally placed on representative, creative, and constructive experiences because of the inability of younger children to fully comprehend the more abstract implication of the economic and cultural aims. Teaching of definite art skills came about after the need for them was felt by the children. Consequently the acquisition of the technique was not an end in itself but a means to an end, namely, the ability of the child to express himself with satisfaction. By means of graphic and glyphic expression the children were enabled to translate vagueness of mental images into absolute truth so that the resultant was educational as well as pleasure producing. The freedom of methods, permitting the young child to develop spontaneously and joyfully his powers of self-realization through educational play, brought about a discriminating regard for his own work and the work of others, a respect for tools, and an appreciation for beauty in its simpler terms.

Naturally the influence of these activities upon the homes of the children is too intangible to be measured so prematurely. However, the experiences derived from making selections of harmonious colors, deciding upon suitability of furnishings, determining pleasing proportions in design, and the application of pride and taste in homemaking, are intrinsic values which should not be underestimated, for they provide definitely for the development of an appreciation of beauty which is essential to the success of the home or community. The household is concerned with the utilitarian and decorative phases of art. Through establishing aesthetic ideals by which articles may be judged these children have surely learned the meaning of that wise man who advised to "have nothing in your homes that you do not know to be useful and believe to be beautiful."

The basic socialized nature of the art content of this unit afforded the child

ample opportunity for better conduct. The development of good habits of neatness, accuracy, carefulness, attitudes of co-operation, unselfishness, personal responsibility, initiative, and invention, which are among the accepted objectives of all education, has been clearly illustrated throughout the record.

To summarize, "In a program of integrated education, art provides the tools, expressions and constructive experiences for participation in a plan which seeks to clarify and relate ideas, information and experiences. Through creative expression, imaginative and memory drawing, designs, color studies, and picture appreciation, the pupil is able to have unified experiences which, when properly related to other phases of education, provide a well worked out pattern. Art, therefore, becomes with other phases of the educational program the means through which the pupil can have vitalized experiences."[10]

[10]Course of Study in Art Education. Bulletin 41, 1933, Harrisburg, Pa. p. 10.

NON-PROFESSIONAL LIBRARY INSTRUCTION IN TEACHERS COLLEGES

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The subject of the study of which this article is an abstract is instruction in the use of books and libraries in teachers colleges, or, in other words, instruction for the patron of the library rather than for one who is to become a librarian. In using the term non-professional in the title of the study, the following definitions have been kept in mind:

Professional library instruction trains for librarianship.

Semi-professional library instruction is the term applied to instruction intended to give training in the care of small school libraries, and often called teacher-librarian courses.

Non-professional library instruction is given with the purpose of making intelligent users of books and libraries.

In teachers colleges, to which this study was limited, the last named type of instruction has been confused to some extent with semi-professional training and the two have sometimes been attempted in the same course. It was not until 1922 that the Readers' Guide in indexing material on library training assigned an entry of its own to the non-professional type. At that time material on this subject began to be entered under "Libraries, Instruction in the use of."

The purpose of this study was to present:

1. A history of the subject, both as to opinions concerning it, and the practice relating to it, especially in teachers colleges.
2. The present status of such instruction in accredited state teachers colleges.
3. The formulation of principles for establishing instruction in teachers colleges.
4. A plan illustrating these principles.

History

The history of non-professional library instruction covers a period of about sixty years and consists largely of an argument in which only one side speaks. Little opposition has ever been expressed to the pleas of educators and librarians for this training in schools and colleges, but the practice of giving it has developed slowly and reluctantly.

In 1876, that important document in library literature, the report on libraries issued by the Bureau of education was published. This large volume contains two articles on the professorship of books and libraries, the import

of which is a plea for training in the use of books and libraries and for a special department for such training in colleges.[1]

Another classic in the literature of the subject is Mary W. Hinman's paper read before the elementary department of the National education association at the session of 1880. In this, she describes in detail what may be done for children in teaching them how to get the most from books.[2]

The two quotations following are typical of early expressions of opinions on the subject taken from many which were brought together by the study.

J. C. Dana, a librarian, said:[3]

> All knowledge is in print, or will be tomorrow. To know how to find in books and journals just the information you need—that is to hold the eel of wisdom by the tail.

W. T. Harris, an educator, said:[4]

> The school is set at the task of teaching the pupil how to use the library in the best manner—that I take it, is the central object toward which our American schools have been unconsciously tending.

An interesting and more recent expression is found in the Journal of chemical education. In this article, the writer emphasized the importance of "book ability" as well as "book knowledge" for the research chemist. "Book knowledge" was used to mean an adequate supply of facts, while "book ability" was used to indicate the ability to exhaust the sources of information on the subject being studied.[5]

In the history, there are not only opinions but accounts of various studies which have been made with either of two objectives: first, to ascertain what library instruction was being given in schools of different types; or, second, to find evidence of the need for such instruction.

Of the first type, the earliest account that the writer found was of a study made in 1898. This was a report from twenty "foremost normal schools" representing twelve states. These in answer to a question as to what instruction was being given to students in the use of reference books made the following record: one reported no instruction; nine gave informal and individual instruction; and ten gave work ranging from informal talks by the librarian

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[1]U. S. Bureau of education. Public libraries in the United States of America, their history, condition, and management. Special report. Part I. Washington, 1876.

[2]Hinman, Mary W. The practical use of reference books. (In National education association. Proceedings. 1880. p. 194-203.)

[3]Dana, J. C. (Quoted in Van Hoesen, H. B. and Walter, F. K. Bibliography. N. Y., Scribner, 1928. p. 2.)

[4]Young, C. C. Use of the library. (In National education association. Proceedings. 1899. p. 1150-55, p. 1155.)

[5]Soule, B. A. Book ability: an outline of the course in chemical literature at the University of Michigan. Journal chemical education 9:1940-2. Nov. 1932.

or heads of departments to the compilation by student of lists of all books, articles, etc., in the library on a given topic.[6]

The earlier studies were more or less unfruitful forerunners of the more important study made by the Bureau of education in 1913. This was an extensive study of the provisions made for library instruction in universities, colleges, and normal schools. The results of the study lost much of their value because of lack of uniformity in describing courses.[7]

A second type of study which has been popular is that which attempts to furnish evidence concerning the need of college students for book and library instruction. At the University of Maine a test given to freshmen showed these results. Those that had had previous instruction made an average of 71.4, those without previous instruction made an average of 59.6. The average for all was 65.35. A comparison was made with intelligence tests, and while there was a slight correspondence, library instruction was found to make more difference than intelligence.[8]

The most notable of these studies is that of Linda M. Clatworthy made in 1929 and 1930 in Denver university. This study was carefully done and had the approval of educators as to reliability. One of the most significant results was that a class of seniors in practice teaching showed a lower progress score than did the freshmen after four lecturers on the library. This seems to indicate that a very little instruction produced better results than three or four years of independent effort even with the more serious students.[9]

Susan G. Akers after making her study of the use of bibliographic items in the catalog was convinced that the library catalog must be made self-explanatory or a better system of instructing students in its use must be found.[10]

Not only have these studies been made but individuals and organizations have, from time to time, set up standards for providing non-professional library instruction to students of educational institutions. In 1906, 1912, and 1915 committees from the National education association and the American library association formulated standards for teachers colleges, all of which were quite similar in make-up. The last two of these recommended three courses, one an introductory course, another, one in children's literature, and

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[6]Adams, Emma L. Instruction in the use of reference books and libraries. Library journal 23: Conf. p. 84-86. Aug. 1898.

[7]Evans, H. R. Library instruction in universities, colleges, and normal schools. (U. S. Bureau of education. Bulletin, 1914:34.)

[8]Walkley, R. L. Library instruction for college freshmen. Library journal 49: 775-7. Sept. 15, 1924.

[9]Clatworthy, Linda M. A study of what the college student knows of his library. (In College and reference library yearbook, no. 3. American library association, 1931. p. 94-9.)

[10]Akers, Susan G. To what extent do the students of the liberal arts colleges use the bibliographic items given on the catalog card? Library quarterly 1: 394-408. Oct. 1931.

a third, technical library methods for teacher-librarians. In 1923, W. H. Kerr's famous measuring stick for teachers college libraries made about the same recommendation, adding, however, elective courses, with credit, in bibliography and reference work. In 1932, the teachers college sub-committee, connected with the School libraries section of the American library association again emphasized in their report a required introductory course with college credit, and a course in children's literature.

As to actual practice in giving courses, it was found that universities were first in giving courses dignified by the name of bibliography while teachers colleges or normal schools were more likely to be interested in an introductory course required of freshmen.

In 1881, the University of Michigan included a course in bibliography and reference in their curriculum.[11] The University of Illinois started a general reference course for freshmen in 1898,[12] and Brown university offered a course in 1902-3 which was later discontinued.[13]

In the proceedings of the National education association for 1904, there are two reports of courses in teachers colleges, one at Emporia, Kansas, and the other at Whitewater, Wisconsin.[14]

On the whole, the history of the subject shows much intelligent and thoughtful consideration which is almost entirely favorable. On the other hand, the practical record of this kind of instruction shows uncertainty and small achievement.

Present Practice

For material on courses in bibliography offered by teachers colleges at the present time, the catalogs of 114 state teachers colleges accredited by the Association of teachers colleges were used. The information gained from these may be summarized as follows:

Of the 114 colleges studied:

44 give a formal non-professional library course.
11 give some informal instruction.
30 give one or more semi-professional courses.
30 give professional work in the library field.

The formal courses offered by 44 colleges were analyzed using replies to a questionnaire sent to the librarian of each college, together with the catalog description of each course.

A summary of the results of this analysis is as follows:

30 colleges require a formal course in non-professional library instruction.

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[11] Evans, H. R. op. cit. p. 4.
[12] Hutchins, Margaret, Johnson, Alice S., and Williams, Margaret S. Guide to the use of libraries. 4th ed. Wilson, 1929.
[13] Evans, H. R. op. cit. p. 4.
[14] National education association. Proceedings. 1904. p. 919-23; 917-19.

In 30 colleges the course is given in the first or freshman year.

33 colleges list the course under the library department.

9 colleges list it under the English department.

1 college lists it under the Education department.

1 college lists it under the heading, Tool subjects.

The highest amount of credit given by any college is 4 quarter credits. 4 colleges give this amount.

9 colleges give no credit for the course, while the others range in amount between these extremes.

48 is the greatest number of hours devoted to the course. 4 colleges give this amount.

5 is the least number of hours. 3 colleges give this amount.

The course appears under 20 different titles in the catalogs of the colleges studied. Library methods ranking highest with a frequency of 10.

Some uniformity of content is found, with the following topics most frequently mentioned: reference books, the catalog, classification, periodical indexes, and bibliography.

Discussion and Conclusions

Having gathered together the material indicated, the study proceeds with discussion of some of the problems involved and offers a few conclusions.

Early in the history of the subject, it is shown that colleges, especially normal schools and teachers colleges, saw the need for this instruction and felt the responsibility for giving the work. Then came the campaign for high school libraries and trained librarians to manage them and give instruction to pupils in book and library use. With this came the idea that the matter was now to be taken care of in the high school, relieving the college of any further responsibility. This has proved an error, and there seems no reason to doubt that after the public school has done all that is possible with the library facilities at their command, the college with its larger collection of books and more complicated technique will find sufficient need for more advanced courses than a high school can offer.

Three distinct kinds of courses present themselves as needed in teachers colleges. The first, an introductory course, should be offered the first year to aid the student in college and after college in the use of libraries.

It is generally accepted that this first course shall be required, but there are reasons for believing that to let the course stand on its merits, especially until it is well established, may lead to improvement not only in the conduct of the class but also in the attitude of students and faculty toward it.

The time given to the course varies from 48 hours to 5 hours, showing that there is little certainty as yet concerning the importance of the course or the scope it should cover.

The units of study offered with the greatest frequency—reference books, the catalog, classification, periodical indexes, and bibliography—do show considerable consistency in the kind of instruction included.

The amount of credit given for the course is also variable, and this is probably based on two distinct attitudes taken toward the course. One group believes that the work is forced upon the college by lack of preparation in a simple skill which should have been gained before coming to college. Those holding this view begrudge any time given to the course and consider it beneath college recognition. A second group think that here is a field of knowledge worthy of attention in itself. On the second attitude is based the only justification for giving collegiate standing and credit for the course.

A better title for the course is worth considering. The one most frequently used, *Library methods,* confuses it with courses intended to teach the management of a library. The writer has suggested *Elementary bibliography.*

A second course needed in the teachers college is one which will give the teacher a wide acquaintance with books that are adapted to children and adolescents, especially in the field of his teaching. A course in children's literature has been frequently recommended and is included in the English department of many teachers colleges. One with this title was found under a library heading. How far some of these English courses may go in supplying the need suggested here the writer does not know, but an intensive study of children's classics should not be allowed to take the place of knowledge of juvenile books. A thorough study of this problem is needed, and a distinguishing name will be helpful. The writer has used Bibliography of school literature.

A third non-professional library course has received considerable attention in connection with universities but very little from teachers colleges. This is an advanced course in bibliography offered usually to senior college and graduate students. There is one example of an advanced bibliography course found in the curricula of the colleges of this study. Fort Hays Kansas state college gives a course called Bibliography and thesis-writing. This is required for candidates for an M.A. degree. The librarian teaches the first part of the course and the head of the English department the second part. The course covers general bibliographic aids; subject bibliography in the various fields; and, practical instruction in making a bibliography.

The suggestions and recommendations found concerning this course led to the following conclusions: there should be a definitely planned course in advanced bibliography systematically conducted as are other courses and having an equal status with other courses; it should have for its purpose "bibliographical application" and should not be a mere handmaiden to informative courses; the work should be differentiated to meet the needs of indi-

vidual students and should be conducted by the librarian with the cooperation of instructors.

General Conclusions

The study which is here outlined led to the following general conclusions:

1. Distinction should be clearly made between non-professional and professional library instruction.
2. The need for non-professional library instruction in teachers colleges is well established as shown by the opinions cited and the fact that nearly one-half of the colleges studied offer some kind of instruction in this field.
3. A need for two courses other than the elementary one usually given is indicated: the one, a study of juvenile books; the other, an advanced course in bibliography.
4. The study also indicates that no complete and thoroughly thought-out plan for bibliographic instruction in teachers colleges has yet been made, but that the subject is worthy of serious attention with a view to defining the objectives more clearly and improving the organization of the work.

A more detailed presentation of the writer's conclusions are found in the planned course of study in bibliographic instruction for teachers colleges which follows:

Part I is catalog copy for a course of study in non-professional library instruction or bibliography to be given in teachers colleges, offered for the consideration of the reader.

Bibliography

Course I. Elementary Bibliography. 2 hours.* Librarian.

The purpose of this course is to give a general acquaintance with the scope of recorded knowledge; a brief history of how knowledge has been preserved in print; and, a practical working knowledge of how to find what is needed from printed materials in libraries. The work will consist of lectures and practical problems in fact-finding and in gathering material for study, using the college library as the laboratory.

Recommended for all freshmen.

Course II. Bibliography of School Literature. 2 hours.* Librarian of training school.

This is a course in judging the value of books for children and adolescents. It is an extensive rather than an intensive study of such literature, given with the purpose of acquainting teachers with the problem of selecting the right books for young readers. Aids for selection will be studied, but the emphasis

will be on knowing the books themselves. Each student will be allowed to concentrate on the juvenile literature relating to his major and minor fields.

Prerequisite: Elementary biblography.

Open to senior college and graduate students.

COURSE III. ADVANCED BIBLIOGRAPHY. 2 hours.* Librarian and others.

The first part of this course will treat of general bibliography, of value to all. This will be followed by individual work by each student in the subject bibliography of his own field. Definite instruction will be given in research work, with the emphasis on the manner of doing rather than on the results of the research.

Prerequisite: Elementary bibliography.

Open to senior college and graduate students.

The course is organized and conducted by the librarian, with the individual subject bibliography work directed by a professor in that field.

Part II of this plan consists of brief outlines or syllabi of the courses offered.

ELEMENTARY BIBLIOGRAPHY

(24 class hours)

UNIT I. LIBRARIES. (8 class hours.)

1. Some old libraries.
2. Libraries of the United States.
3. Local college library.
4-5. Classification.
6-7. The catalog.
8. Test.

UNIT II. BOOKS AND PERIODICALS. (12 hours.)

1. The history and physical make-up of a book.
2. The history and physical make-up of periodicals.
3-6. Reference books used as aids in finding material.
   - A. Inclusive, such as U. S. catalog, Readers' guide, etc.
   - B. Selective, such as Book review digest, Standard catalog, Education index, etc.

7-12. Reference books containing the material.
   - A. Limited in scope, as:
     - a. For words—dictionaries.
     - b. For people—Who's who series, biographical dictionaries.
     - c. For places—atlases, gazeteers.
     - d. For allusions—handbooks.
     - e. For quotations—quotation books.

*This indicates quarter hours.

f. For statistics—almanacs, yearbooks, government documents.

B. Unlimited in scope:

a. Encyclopedias.

b. Periodicals.

UNIT III. PRACTICAL PROBLEM IN FACT-FINDING AND GATHERING MATERIAL. (4 hours.)

1. Summary of aids to use as studied in units I and II.
2. Bibliographic form.
3. Note-taking and organizing material.
4. A brief completed bibliography and outline of a subject.

BIBLIOGRAPHY OF SCHOOL LITERATURE
(24 class hours)

UNIT I. READING INTERESTS AND AIDS IN SELECTION. (6 hours.)

1. Studies on the reading interests of children.
2. Studies on the reading interests of adolescents.
3-6. General aids in selection: Standard catalog for high school libraries, Children's catalog, Realms of gold, Books for home reading, Graded list for children, Books to read, 500 books, The right book for the right child, and others.

UNIT II. REFERENCE BOOKS. (6 hours.)

1-3. Estimating the value of adult reference works for children.
3-6. Studying and comparing the value of reference works written for young people.

UNIT III. INDIVIDUAL WORK ON SUBJECT BIBLIOGRAPHY OF SPECIAL INTEREST. (12 hours.)

1-4. Lists and bibliographies of special subjects.
4-8. Reading and reviewing typical and recommended books on subject.
9-12. Preparing an annotated bibliography of books read and examined in the course.

ADVANCED BIBLIOGRAPHY
(24 class hours.)

UNIT I. PRACTICAL BIBLIOGRAPHY. (6 hours.)

1. Libraries: their history.

An example of work for Unit III: a science major in this part of the course will study the sections devoted to science in general bibliographies such as those mentioned above, and the special aids in his own subject such as Enriched teaching of science in the high school, by Woodring and others, and The high school science library, by H. A. Webb. He will then choose books for reading and review, and make a selected bibliography of books which he can personally recommend.

2. Libraries: their resources and use.
3. History of books: their writing and printing.
4. Bookbinding. Publishing.
5. General reference books.
6. Bibliography of bibliographies.

UNIT II. SUBJECT BIBLIOGRAPHY. (Individual work.) (12 hours.)

1. Value of general reference books for the special field.
2-4. Special works on the subject.
   A. Value in themselves.
   B. Value in directing to further sources.
4-8. Periodicals.
   A. General.
   B. Special on the subject.
9-12. Bibliographies.
   A. Bibliographies of bibliographies.
   B. Trade bibliographies.
   C. Select bibliographies.

UNIT III. HOW TO DO RESEARCH. (6 hours.)

This unit will consist of a practical problem in bibliography making.

EDITORIAL

A CHECK LIST

"What are the qualities which make up a good teacher?" The question was asked in good faith by a young college graduate, at that time (April) just completing her first year of teaching. Of course, the question can't be answered with much reassurance. One would be trapped who essayed explicitness. For success in teaching depends not alone on the existence of certain qualities but on the interplay of those qualities. And that interplay is likely to be so subtle as to escape casual scrutiny. The question therefore can be answered only with certain reservations. But it was asked in good faith and we have had ample time and opportunity—and need to weigh teaching critically and to match its seeming validity against the existence of various qualities. So, we submit the following list, quite aware of its incompleteness:

1. The teacher must be personally attractive to those whom she teaches.

2. She must find the children whom she teaches attractive, interesting, indeed thrilling. They may and will harass her at times, but they must inspire her always.

3. The occurrences of the statement that the teacher should know the materials which she essays to teach now run into the upper millions. This oft reiterated statement happens to be true. She must have at least a fair understanding of the content which is her medium of work.

4. She must have some understanding of how children learn, under what conditions they tend to gain the surest mastery of material, those materials and activities which tend to bring children to a clearer conception of life's affirmative qualities.

5. She must, in the main, find life well worth the living, a sort of joyful adventure. If she becomes stale, or bored, or stops adding to her intellectual store, she thereafter has nothing to offer her children. Further, there are many phases to the world in which she lives her life. She perhaps should not find a vital interest in too many of those phases. She must not in too few.

6. She must accept and comply with the conventions which her race by long and thoughtful experiment has found to be desirable.

WHAT PHILOSOPHY OF EDUCATION IS

Some students inquire what philosophy of education is, what it deals with and whether it has permanent and substantial value. To me the answer is fairly simple and easy, but my notion may not be entirely clear to anyone else.

The terms through which we communicate with one another keep constantly changing in their meanings as the years go by. Philosophy and psychology are much akin; both are of great significance; both have bases in human experience; both are dominant factors in the make-up of every well organized personality. Psychology, of course, treats of how people come to be what they are. Philosophy, in the large part, seeks to discover and set forth reasons why people become what they are and why they behave in so many curious ways.

Philosophy is the ballast and balance wheel in the stabilizing of civilized men and communities. It supports the firm belief of everyone in his own or her own principles of politics, religion and social customs. But it constantly keeps and makes operative the suspended judgment whereby every member of every community may be duly guarded against any intolerance towards any other person or community.

Philosophy keeps people inquisitive as to all the events of all the past and anxious to preserve and perpetuate the good ideals, customs and practices of the past. It encourages discriminating initiative in providing for the future so as to secure the attainment of the greatest good for the individuals and the community.

Every self-acting sane person has a philosophy. The man without a philosophy is like a motor car in action without a chauffeur. He is going somewhere, but doesn't know where he is going, or where he may bump someone off, or where or how he may stop.

I think one of the finest examples of a great man's philosophy is Herbert Spencers' formula of justice. He says, "Everyone is free to do what he or she desires and wills to do just so long as he or she infringes not the equal freedom of anyone else."

As for my present view I regard the sum total of philosophy in all its phases and aspects as a continuing re-orientation and re-integration of life's wholesome experiences. As a study I now regard it just as well adapted to senior high school and junior college students as to senior college students.

JOHN R. KIRK.

LIBRARY EDUCATION

Edited by LOUIS SHORES

Library Education Presents

No one at all interested in the problems of higher education can fail to be aware of the significant changes now under way on the American college campus. Within the past few years definite reforms planned to eliminate the evils of our quantitative standards exemplified by the course and credit system, the wholesale granting of degrees, the stress on residence, and classroom methods, have resulted in various new plans featuring independent study and a consequent greater recognition of individual differences. Autonomous course, honors reading, preceptorial and tutorial schemes, have arisen to replace classroom attendance at Antioch, Swarthmore, Princeton, Harvard, Chicago, Columbia, Southwestern, Rollins, Stephens, and scores of other places. To the library-minded observer the implications in this clearly-defined trend grow daily more obvious. It is apparent that the college library is likely to play a very much more important part in the learning process than ever before.

With a view to learning more about the individual college plans now in progress, Library Education has undertaken to sponsor a series of articles by college presidents or other responsible officers of institutions experimenting in higher education. President Joseph Brewer's article in this issue inaugurates the series with a keen discussion of some fundamental higher education problems and an interesting introduction to an experiment which has already focused the attention of educators and laymen on Olivet College in Michigan.

The article by Miss Mabel Harris, who received her master's degree from the Peabody Library School last June, is an abstract of her thesis. The subject is particularly timely in view of the study now in progress under the joint supervision of the Association of American Teachers Colleges and the American Library Association.

Southwestern's Library College

"Why do Southwestern students read more than twice as many books as do students on an average in the best colleges in the country? . . . One reason is that Southwestern has an excellent library. . . ." So begins the exposition of the Memphis University's tutorial plan, organized almost entirely about the library, in an attractive little prospectus intended for new students. President Diehl and Southwestern university are to be congratulated for featuring the one department which determines the scholarship level of a college's work. Other institutions in the mad scramble for student tuition may hold out social inducements, or athletics, or new buildings and equipment, as bait to the high school graduate tussling with the problem of "which college," but sooner or later rewards in the form of numerous misfits will follow. Such a brochure as Southwestern has just issued lends dignity to a college education and appeals to prospective students on the only grounds student recruiting is at all justified.

Princeton's Humanistic Library

A revolutionary building plan is contemplated in Princeton's new humanistic library for which a committee to raise funds has just been appointed. The proposed structure is designed to provide an intellectual center for the departments classed in the social sciences and the humanities, and to furnish every upper classman and graduate student in these departments with an individual desk and locker adjacent to the books related to his field of study.

The Library in Educational Literature

GILLILAND, F. H.

Organization of the supplementary reading set for elementary grades. American school board journal, 89:3:44, 46, September.

The superintendent from Devils Lake, North Dakota, dissatisfied with the average teacher's lack of librarianship outlines simple but workable procedure for organizing a classroom collection.

GRUMMETTE, JESSE

An investigation into the reading tastes of first-year high school students, with a particular view to comparison between the tastes of boys and those of girls. High points, 16:7:23-30. September.

"The students undeniably read enough. The problem is to make them read better books, even at the expense of quantity."

OTTO, HENRY J.

Reference books in modern classroom teaching. American school board journal. 89:2:46, 49. August.

"It appears that the newer teaching techniques call forth types of pupil activities which make an ample supply of classroom reference material an indispensable aid to teaching, and hence an essential feature of classroom equipment."

HUNTER, ELDEN.

A story of the periodical reading done by college students. School and society, 40: 70-72.

Literary Digest, Atlantic, Readers Digest, Time, Harper's, lead all the rest in favor among college students according to this investigation.

MILLS, H. C., AND ECKERT, RUTH E.

An evaluation of reading as a unit in a "How to study" course. School and society, 40:261-64. 25 ag.

A study of Buffalo high school juniors by the University there, with a view to approaching the problem of articulation. Results: Special training in reading techniques increases speed but not comprehension.

Peabody Contributions to Librarianship

The first two titles in this series were released in September. Number one is a reprint of Margaret Rufsvold's History of School Libraries in the South, and number two is J. I. Copeland's Periodical Checklist for a Teachers College Library, both of which originally appeared in the July issue of the PEABODY JOURNAL OF EDUCATION. Miss Harris' article in the present issue will be reprinted as a separate to make number three in the series. Future contributions to the series will be selected from the various studies of educational phases of librarianship made by faculty and students of the Peabody Library School.

November Issue

An article on school libraries in Alabama, by Miss Willie Welch, State Supervisor of School Libraries, will inaugurate a series of similar articles for other states by authorities in the school library field. The fourth Peabody Contribution to Librarianship will be an abstract of the study of the Rosenwald county library demonstrations in Tennessee by Lucile Merriwether, librarian of the New Mexico State Teachers College. It, too, will appear in the November issue before being reprinted.

COLLATIONS

A Bimonthly Review of Publications Relating to Education

Edited by LOUIS SHORES

1. The Contribution of Geography to Civilization

A. E. PARKINS

Professor of Geography, George Peabody College for Teachers

BOWMAN, ISAIAH, AND CLARK, ROSE B.

Geography in relation to the social sciences. New York, Charles Scribner's Sons, 1934. (Report of the Commission on the social studies, American historical association. Part V.)

The Authors: Dr. Bowman is the author of the portion of the book that discusses Geography in Relation to the Social Sciences; Miss Clark presents the results of a very extended 227 pages investigation of geography teaching in European schools, 152 pages in the second part of this volume.

Dr. Bowman sets as his task the answering of such questions as "What do geographers produce in their efforts to advance the borders of knowledge? Does geography occupy a distinctive place in scholarship and education? What contributions can geography make to the so-called social sciences? The reviewer will follow in general the trends suggested by these questions.

What has been the contribution of geography to civilization and what is geography good for? These are questions many administrators of universities, colleges, and high schools have asked in the last two decades as the subject, the science, has by degrees begun to occupy a fairly conspicuous place in our curricula. It never will assume the dominance it once had in pre-Christian days, in the Renaissance, and during the Age of Discovery, for the geography of the ancients and that of the investigators of the middle period of history has been split up into many fields of study. Our geology, physiography, astronomy, history, zoology, enthnology, anthropology, and sociology, all, had their beginning in geography, or were cultivated along with geography by the great Greek intellectuals, such as Thales (B.C. 640), Anaximander (B.C. 611), Herodotus (B.C. 404), Erastostenes (B.C. 276), Aristotle (B.C. 384), and others. Science then was undifferentiated. Geography was the sum total of all that was known about the earth and its inhabitants—men, animals, and plants. Geography is the Mother of Sciences.

By Strabo's time (B.C. 64-24 A.D.) geography had become differentiated into many of the fields we moderns cultivate. It still included the land, the sea, and all the creatures thereon and therein. The volume of material written on the earth and life was immense even at that time. Pliny the Elder (23-79 A.D.) in his well-known work quoted from 4,000 works. Ptolney (about 151 A.D.) wrote a "system of geography" of 8 volumes. Strabo declared that geography was a subject worthy the consideration of philosophers, and that it should be studied by kings. "The greater part of geography," he writes in his series of geographers, older by more than a cen-

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Footnote: Dr. Bowman is director of the American Geographical Society of New York; President of the International Geographical Union, 1931-34; a director of the National Research Council; gold medalist of the Paris Geographical Society, and the Chicago Geographical Society, Livingston Medalist of the Royal Scottish Geographical Society, Director of the celebrated House Commission of the Wilson Administration, author of Forest Physiography and The New World. The latter is a modern Political Geography that deals with the geography of international problems, now in its fourth revised edition.

Miss Clark is professor of geography in the Nebraska Wesleyan University.

tury that of the New Testament, "subserves the needs of the state; for the scene of the activities of states is land and sea, the dwelling place of man."

In all ages since Strabo's day there have been great minds that found interest and contentment in recording the observations and studies made by themselves and others of land and life. Pliny the Elder and Ptoleny as just noted, Bacon, Newton, Kant, and a host of others observed, philosophized, and wrote quite as much in the field of geography as in other fields.

Geographers have also been numbered among the great explorers. Columbus, De Gama, Magellan, Drake, Frobisher, Hudson, Capt. Cook, and Ammundsen were geographic explorers and so also is our Byrd. Geographers have been measurers—measurers of the earth's size, the area of lands and sea, latitude and longitude locations, the speed of ocean currents and winds, the flow of rivers in volume and velocity. Geographers are employers of statistics, of areas of cropped land and of forests, tons of ore mined, bushels of grain produced, inches of rainfall, length of growing season, and so on, and with all they endeavor to explain these different items in relation to earth features or to show their relationship to human society, economic activity, and human welfare.

The map which guides the present day mariner over the uncharted seas, which the military strategist uses in planning a campaign, and the exporter consults in seeking distant markets is a geographers' device. A railroad folder is a much distorted map. An highway map is *a map*. What would we do without maps? Since the beginning of geography 2,500 or more years ago maps have been the device for recording geographic discoveriers and geographic distribution and from them may be developed geographic correlations. "Geographers employ a technical and therefore highly condensed map language to describe their (natural and cultural) *Geo*, thus extending their understanding if not their view far beyond their swelling horizon." On some maps used by geographers one may find a score to a half hundred different sorts of items, all in their proper place. Geography through maps teaches a sense of orderliness of earth features and human phenomena related to earth environment.

"Besides being an explorer, a measurer, a describer, a map maker, and an interpreter of natural and cultural earth features, the geographer," Dr. Bowman points out, "is a synthesizer of the data of his subject, according to those realities of experiences called regions, and this brings him to fraternize with the historian, the economist, and the sociologist." Regional history, regional economy, regional sociology are present day concepts that are functioning in interpreting human behavior. The region is a geographic concept and the differentation of regions is based on the physical features of the geographic environment or on activities that are geographically conditioned.

"Geographers like to know about the earth as man's home just as the astronomer likes to know about galaxies." The botanist likes to know the plants of his region and the adjustments nature has made in structures and physiology to their habitat. The zoologist likes to know about the animals of his surroundings and to interpret their behavior in terms of environmental conditions. The geographer aspies to know the environments of the earth, their agricultural, mineral, climatic, biologic, and power resources and human behavior in these environments. He also wishes to know what people work and play at; and why they work and play as they do? He is interested not only in the adjustments man is now making in the conditions of his environment, but he likes to trace out man's sequent adjustments. The geographer thinks that the study of man in the various regions of the world is just as important as a study of bull thistles and pollywogs. The geographer is unable to understand the mentality of some educational authorities

who seem to think that zoology is a subject that belongs to higher institutions while geography a study of man and God's earth should rise no higher than the intermediate grades. Certainly it should be as intellectual a pursuit to dissect the human behavior complex of an urban or rural region as to dissect a frog; to trace out the evolution of society in its sequent adjustments in some specific geographic region as to follow the evolution of a pollywog.

Is geography a science? As Dr. Bowman sees the question, "A science is a point of view, a method of research, and a specific—which implies limited—group of facts. * * * Geography, like other sciences, applies definite methods of study to certain groups of systematically collected facts in the attempt to recognize significances and possibly to identify rational relationships * * *." Geographers are not merely teachers of synthesized facts that the workers in other fields have discovered. That they are and have been discoverers, measurers, and describers has been previously stated. Geography "is not merely soil sampling, rainfall determination, land-form description, and commodity listing and movement; it is also chiefly a study of the living conditions of mankind as affected by regional combinations of specific soil types, climatic averages and extremes, vegetational resources and potentialities, and other environmental conditions, together with production habits and possibilities, and landscape effects that give every area its characteristic stamp."

Like other sciences there was a period in the long life of the science of geography in which fact finding and organization of the facts was the major function of the geographer. The explanations that were ventured savored of theology and the supernatural or the fantastic. It became a rational subject, a philosophical subject—its philosophy based on facts acquired, assimulated, organized, and correlated—in the eighteenth and nineteenth centuries. The trained geographer now has the power of prediction. "No serious investigation," writes Dr. Bowman, "can be made of food resources, population capacity, the probably profitable lines of national development and specialization, or of conservation policies, unless one take account of the detailed character of the soil, the regional qualities and differences of the several elements of the climate and the topographic features that limit or encourage specific types of agricultural practices. Nor can one carry any one of these lines of investigation forward to the point of forecast without having a knowledge of the workings of the natural laws that come into play."

The author well sums up the function of geography as the mental make up of a scholar. "To look at natural region and social forms and processes in relationship to them is to be aware of a very complex reality. Geography has an important place in the social studies not by 'proving' things about complex reality, but by introducing a point of view, by expertly handling specialized data, and by expressing generalizations with the same caution that the chemist exhibits when he thinks he has discovered a new mode of occurrence."

"In the foreground of any inquiry respecting mankind is the necessity of relating him to his environment. The historian and the economist especially are accustomed to take this principle into general account, but in so elementary a sense as to defeat their purposes. The geographer attempts to provide a detailed regional analysis that deals with the realities of place and area."

Beard in *A Charter for the Social Sciences* defined the function of social studies in schools to be the creation of rich, many-sided personalities. Does geography qualify as a contributor to such a program? If to know the occupations of man the world over and how these occupations are related to specific environmental conditions, as rainfall, mineral resources, plant life, surface, length of growing season, location, power resources, and many other factors that go

to make up the complex, will contribute to these ends, then geography functions. Geography helps the learner, youthful or mature, to visualize the life of the Laplander in his cold northern environment, of the Bedouin in the Sahara, the Bantu in the Congo jungle, the Norwegian fisherman on the cod banks of the Lofoten Islands, of the Kirghiz herder in central Asia, of the Danish or Holland dairyman, of the industrial worker, man or woman, toiling in great factories in America, England, Germany, Belgium, or Japan. The student of geography studies the cross section of the world's economic structure, and discovers the interrelation and interdependents of the parts. He discovers that many, if not most, of the great international problems of today are intimately associated with a struggle for space, control of economic resources, strategic sites, or man power. All these are geographically based. The Monroe Doctrine is fundamentally geographic. So also is Japanese expansion into Manchuria and Japan's attempts to control the commercial life of China. The industrialization of Britain and Germany in contrast to the dominance of an agrarian order in Spain, Italy, and Greece are conditioned or limited by the presence or absence of coal and iron. Man in his economic evolution tends in the long run to utilize what nature gives to his environment. Geography gives meaning to much of man's behavior that is related to his physical environment.

Geography is for people who want to see order and the reason for things that are earthy, and for man's economic, social, and political activities the world over. "We may stupidly gaze at the world," Dr. Bowman points out, "as soil, rock, water, air, and animate things; or go a little higher and see some of the myrid realities of organized life; or go a little higher still and share in the formulation of new social concepts, and occasionally and with due modesty—not being God, as Justice Holmes would remind us—give a little push to ideals that offer material as well as spectural and social standards." With trained teachers, grade placement (placement above the juvenile levels), and sufficient time geography may lead the learner into these loftier realms and make its contribution toward developing "rich and many-sided personalities."

Most of that part of the volume written by Dr. Bowman discusses in great detail and clearness the function of measurement in the geographic interpretation of problems associated with changes in earth features, surveys, and land utilization, state, national, and international boundaries, the degree of man's control of earth resources, the relative degree of culture of nations, and many others. Chapter three discusses some of the geographers' contributions in population and land studies, and studies of the conservation of our resources. It is land studies especially that the geographer with his training in the synthesizing of numerous factors that go to make up a regional complex, is at home. The "Technique of Geographic Analyses" is the theme of Chapter four and Chapter five (55 pages) treats Regional "Geography," "the culminating branch" of the science of geography. In the sixth chapter the author considers the "Economic and Political Bearings" of geography. The last chapter returns to the theme of the title of the book and its application to the curricula in geography. To quote, "The goal of geographical or science, on the human side, like that of all social science, is to learn the interrelationship of some of the innumerable factors which constitute the regional and inter-regional complex of life in any area." * * * "The effects of geographical forces and conditions are felt indirectly or directly and to a greater or lesser degree upon most phases of human activity, whether we think of economics or politics, international relations, manners and customs, or recreation, religion, and art."

"The intimate affiliation of human geography with the social sciences will lead, of

course, to the expansion of ethical elements, that is, the direct use of geography to further the ends of a society that strives to improve itself through increased command of its environment or more intelligent adaptation to it. This leads to wider and wider deployment of the subject from neighborhood to region, to nation, and finally to the world as a group of interrelated parts in even closer association."

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2. Our Professional Principles

MORRISON, HENRY C.

Basic principles in education. Boston, Houghton Mifflin company, c1934, 452 p. $2.50.

MURSELL, JAMES L.

Principles of education. New York, W. W. Norton & company, c1934, 505 p. $2.75.

MURSELL, JAMES L.

A workbook in principles of education. New York, W. W. Norton, 1934, 140 p. $1.25.

Our professional literature to date has dealt so much with practice and so little with principle, that it is no wonder our educationists are treated as practitioners rather than as scholars by colleagues on academic faculties. As Professor Morrison ably puts it in the preface to his book, "For a good many years, in attempting to study the fundamentals of our art, first with schoolmasters and teachers in practice and then with university students in education, I have chiefly been struck by their desire to be told 'how to do it' and by their reluctance to believe that recipes cannot be written so that he who runs may read and running quickly, and with minimum effort, arrive at pedagogical efficiency."

It was perhaps with a realization of this sad but true commentary on members of our profession, that Professor Morrison, unintentionally no doubt, "wrote down" the opening chapters on *Chance and System* and *Terms* and *Sources* to the level where they must appear platitudinous even to the college freshman.

For example, much of the term defining appears to be superficial hair-splitting or glib glossing over. The whole lecture-method question is dismissed briefly as "an entirely inappropriate form of instruction below the university level . . ." and ". . . the appropriate form of university instruction, save in those cases in which the laboratory or the seminar is the form indicated by the particular process being carried on." Again, the author objects to what he calls the "erroneous use" of the word "laboratory," in connection with the "practice of having pupils in history, literature, or other schoolroom subjects use several books, in substance use a library, instead of conning and reciting from a single textbook." Just why this is unjustifiable does not appear to be clear at all, since both his general and particularized definitions of the term "laboratory" exactly describe the library method for the arts subjects. Still, if one prefers, and considers it important, it should be a small concession to label the science workrooms "laboratories" and the arts workrooms "studios."

But with the beginning of the third chapter, there is a decided and encouraging upturn in the whole tone of the book. *Man as a product of organic evolution* affords an interesting prelude to the subsequent discussion of the *Adaptive Organism* and its physiological and psychological aspects. The whole problem of mind versus matter, or the physical as opposed by the psychical is especially well treated in the fourth chapter. Abundant illustrations are furnished in reply to the Behaviorist's claim that all psychial processes can be explained in terms of the physical. The study of personality as itself an organism is readably presented, and while many will disagree with Dr. Morrison's psychology, all will find his biologic approach to our education principles stimulating.

Professor Mursell, of Lawrence College, is apparently more interested in sociology than he is in biology, for he undertakes to show that education as a process of

adjustment is related to social institutions. In his opinion, the most salient institutions to which the educational process relates, are state, family, economic system, recreational institutions, and the institutions which exist to preserve and to promote health. The organization of material is based on the results of a questionnaire sent to two hundred and ten teachers of principles courses, to determine which topics these teachers considered most important. Four parts, each comprising five chapters, deal successively with *Foundations, Outcomes, Problems* and *Instrumentalities.*

It is evident that Professor Mursell's educational thinking follows the now conventional line of the "Progressives." For that reason he frequently berates the "Traditionalists" who appear to insist on making things hard instead of easy for the child. In view of conditions it would appear to be more urgent to criticize those who are making education so easy that it is practically ceasing to be education at all.

A Workbook to accompany the text has been prepared by the author to enable college students to read with comprehension. The exercises will probably be helpful to some and annoying to other students.

The reader with adequate biologic background will find Morrison more satisfactory; the reader with sociologic interests will find Mursell more readable; the reader who is equally prepared or equally unprepared in both sociology and biology may find something to be wished for after reading both volumes or either alone.

L. S.

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3. Psycho-analysis and Amentia

CLARK, L. PIERCE

The Nature and treatment of Amentia. Baltimore, William Wood & Co., 1933. 306p.

This is a study of amentia from the psycho-analytic point of view, a field which has been regarded as unpromising since the effort of Itard, roughly one and one-third centuries ago, to educate the "Savage of Aveyron" who had been pronounced an incurable idiot by Pinel. The Freudians are possessed of great confidence in the successful application of their techniques to new fields. With respect to the present problem, the author regards idiocy as a "libidinal fixation on the intra-uterine phases of development" (a primary narcissism), but not a static condition. That is, this supposed "direction of sexual libido or emotion toward one's self as object" (see the author's Glossary), is regarded as susceptible of treatment by proper motivation so that the arrested development may be overcome and the condition alleviated. The terminology is pompous, but the scientific individual can have little confidence in the technique even though several case-records of idiots and other aments are presented and analyzed. In justice to the author, who has spent much time on the problem, it is only fair to say that the real test of any hypothesis like his is to study the results extensively, especially in this important undertaking. It is unfortunate that the death of the author after the publication of the book has cut off the possibility of such evaluation of his work. J. P.

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4. Punishment and Progress

TUCKMAN, JACOB

The Influence of Varying Amounts of Punishment on Mental Connections. New York City, Bureau of Pub. Teach. College, Columbia Univ., 1933. 45p. $1.50.

This book reports in a condensed, symbolic form the work of one of E. L. Thorndike's student in a study to determine the effects on associative learning of different degrees of punishment for wrong responses. The punishments were of two types; besides the spoken word "wrong" the subject might be deprived of one-, two-, three-, or four-tenths of a cent (all were deductions from money originally given the subject) or he might be given one, two, three, or four electric shocks. The mildest punishment was just the spoken word "wrong." Successively different situations of the mul-

tiple-choice type were presented to the subject and each subject was to select in each situation one of four English words presented with a nonsense word or one of six parts of a nonsense form or diagram presented with a given part. The "correct" selection was arbitrarily determined by the experimenter. The repetition of any one situation occurred only after 19 or 39 or 99 or 199 other situations had intervened. The subjects were 100 boys with a mean age of 13 yrs. 4 mos., varying in IQs from 83 to 139 (mean, 102). For right responses the word "right" was spoken by the experimenter. Results showed very little influence of different amounts of punishment, though there was a slight tendency "to repeat less the most punished connections." Several conditions in the experiments leave little room for expecting results different from those obtained. J. P.

5. The South

HAWK, EMORY Q.

Economic history of the South. New York, Prentice-Hall, 1934. 557 p. $5.00.

Professor Hawk of Birmingham-Southern has given us a well written economic history of the South suitable for use as a college or university text. The organization of the book is logical. The first chapter concerns the geography of the South as related to its economic history. This is followed by chapters on agriculture, industry, population, and finance during the colonial period. The Revolutionary War, the ante-bellum South, and the Civil War with its aftermath follow this. The section on the ante-bellum South receives full treatment and covers land and population, agriculture, industry, transportation, and finance. Only the period from 1880 to the present is treated briefly, less than a hundred pages being devoted to it. This seems unfortunate when one considers the enormous change that has come over the South during the past fifty years.

Bibliographical notes, which will prove useful to both students and teachers, are placed at the end of each chapter. J. I. C.

6. The States

SHANKLE, GEORGE EARLIE

State names, flags, seals, songs, birds, flowers and other symbols. New York, H. W. Wilson company, 1934. 512 p. $3.50.

Every reference librarian will tell you that such a volume as this has been badly needed for a long time. Of course there have been dictionaries, cyclopedias, and other reference tools to which the reader could turn in the past, but no one of these aids had ever succeeded in assembling in one place the vast amount of information contained in Dr. Shankle's work.

The book is organized as follows: origin and significance of state names; state nicknames; mottoes; seals and interpretations of them; flags; capitol buildings; flowers; trees; birds; songs; miscellaneous items like colors, swords, etc.; and an excellent list of leading state histories. A most detailed alphabetical index in the back makes information instantly available to the rushed reader.

There is so much of interest and information in the volume that one could easily and profitably spend days browsing among the facts so carefully and accurately presented here. Any one who is interested in his native state, and who is not, will want to get acquainted with the symbols which probably more than anything else form the picture of that state for outsiders. But most important of all is the reference value of this work. It is hardly conceivable that a single American library will want to be without at least one copy of Dr. Shankle's book, and the chances are that most libraries will have several duplicate copies.

7. Administrative Centralization

STRAYER, GEORGE DRAYTON, JR.

Centralizing Tendencies in the Administration of Public Education. New York: Teachers College, Columbia University, 1934, pp. vi + 123.

The trend toward centralization in the administration of public education is looked upon with fear by some educators, and

with hope by others. The exact nature and extent of this tendency is known by few. This dissertation presents the facts in regard to the centralizing tendency in three states: North Carolina, Maryland and New York, for the period since 1900. These facts are presented clearly and concisely, and in such functional organization as to make them easily understood, and as to aid in their interpretation.

The interpretation is based upon three criteria proposed. These criteria are taken in substance, and quite largely in wording, from three sources, with supporting citation in each case. The sources are: First, the Educational Finance Inquiry Commission, *Educational Finance Inquiry*, Vol. I. Second, "School Administration and Conflicting American Ideals," by William F. Russell in the Teachers College Record for October, 1929. Third, National Advisory Committee on Education, *Federal Relation to Education*, Vol. I. While the criteria are in no sense original, the bringing of all three to bear upon given situations is something not previously attempted, and is distinctly stimulating.

Some of the interpretations are such as to lead to some question as to their applicability, *e. g.*, "The establishment of certain minima relating to size of classes and number and salaries of teachers . . . are suitable phases of education for centralizing purposes" (p. 47). Or again, "State colleges and normal schools are not necessarily local institutions. There is no need for maintaining local initiative or local opportunity for experimentation" (p. 46).

The study as a whole is a significant effort to approach one of the fundamental problems of modern educational practice. It is worthy, and deserves thoughtful consideration by all who have to do with administration in the field of education.

NORMAN FROST.

8. Educational Sociology

TUTTLE, H. S.

A social basis of education. New York, Crowell, 3.00.

This book is an unusual, but quite fortunate, combination of educational philosophy, certain aspects of educational psychology, educational sociology, and an argument for socialized school procedures. The titles of the four parts give a real indication of the nature of the book. Part I deals with the "Goal of Education," part II with "Psychological Processes," part III with "Society as an Educative Agency," and part IV with "The School as a Social Agency." The treatment throughout is a philosophical interpretation by the author of selected studies and writings on the topics considered. The citations are extensive and up to date.

This book should be of particular value to those engaged in curriculum creation or revision, and to advanced students in educational sociology.

NORMAN FROST.

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9. Music Education

MURSELL, JAMES L.

Human Values in Music Education. New York, Silver, Burdett, and Company, c 1934. 388p. $2.40.

The book contains nothing new; but there are well formed ideas that will cause supervisors of music, old and new, to think. Mr. Mursell stresses participation in music instead of spectatorship. This is fine, and it is hoped that the principals of high schools, presidents of colleges and universities will be impressed and will follow his ideas in having participation by the student body, in singing good music in assembly, and will not continue in the "spectatorship" aspect. Much good advice is given to all music teachers in avoiding "their chief business to teach certain types of expertness with the fingers, or the lips, or the arms, or the larynx." The author also puts his finger on the weaknesses of the conservatories of music. He reiterates well known facts that may be tiresome but are

very impressive. One statement stands out that should be considered by schools and colleges. That is: "Any subject loses by vitality . . . with the formal system of grades, recitation, tests, and credits." Space is practically wasted in his cogitations concerning the methods of teaching the reading of music. "Sugar-coated" methods of teaching he scorches. The ladies in the teaching profession should listen to him. There are so many things that are so good in this work that we cannot list a tenth of them; but we must call attention to his chapter on "Interesting." He is sound.

From the tenth chapter to the end of the book, it is instructive and interesting. The cultural background is sane, as he states it, and breaks the "credit hour yardstick" of the Music Supervisors' National Conference. Musicianship, he demands, instead of dexterity of the fingers and the larynx. It would be interesting for him to give more space to practice teaching which is, at present, a farce in all the teachers colleges and state normal schools in the United States.

As a whole, this work is astonishingly effective; but it shows the weakness of the psychologist by stating what should be done instead of suggesting how to accomplish a thing—for example, his chapter on "Interesting" is excellent, but he does not tell us how to create "interest" in the child, the teacher, the principal, the superintendent, and the college president. His work is weak through his omission of "How to interest superintendents in music as a valuable educational subject." He should give credit to the grade teacher, while he truthfully adversely criticizes the supervisors in their musicianship, background in culture, and expertness of teaching. D. R. GEBHART.

10. Physical Education Majors

McCULLOCH, A. M.

Gymnastics, tumbling, pyramids. Philadelphia, W. B. Saunders co., 1934. 173p.

This is an informal presentation of gymnastic work in which tumbling stunts, exercises on various pieces of gymnasium equipment, and pyramids are presented with clear cut illustrations. It contains over 260 illustrations. This book should prove of benefit to Physical Education teachers.

D. T.

11. Archaeology

VAN DEMAN, RALPH.

The Lure and Lore of Archaeology. Baltimore: The Williams & Wilkins Company, 1930. Pp. x + 107.

The scope of this small book is almost world-wide, not quite from "China to Peru," but almost: Mesopotamia, Palestine, Egypt, Asia Minor in Africa and Asia; Greece, Italy, Switzerland, Germany, Austria, Great Britain in Europe; and the two Americas. Strangely the author has not included France.

Enough facts are given to make the narrative realistic and valuable. The descriptions of the notable finds are satisfactory, though not adequate to supply the lack of illustrations. Part I deals with the lure and Part II the history of archaeology, while Part III gives an excellent summary of modern improvements in archaeological work in all fields.

The book is popular in tone, but evidently addressed as much to the organizers and financial supporters of excavations and museums as to the general public of intelligent readers. C. E. L.

12. Cicero's Letters

Selected Letters of Cicero, edited by Hubert McNeill Poteat. Boston: D. C. Heath and Company, first edition 1916, revised 1931. Pp. xiv + 276.

The selections are edited for college freshmen, especially for those who may have come through poor high schools. The eighty letters chosen are those thought most likely to throw light upon Cicero's life, habits, and character. The notes are, the editor declares, written to create interest and arouse enthusiasm in the students and to thelp them see the actors in these scenes

as living figures. All notes are at the end of the book (89-267). A list of the fifty most important letters is given on page xii, and an index of names (269-272) and of matters (273-276).

As conceived by the editor, the helps offered in this revised edition are adequate for syntax, geography, and biography, though hard to find in the pages of notes, which are written in a sprightly way, sometimes admirably done, as the comments on Cæsar and Cicero in Letter IX, page 109. The sprightliness at times descends to objectionable sarcasm and jocularity, as in the comments found in Letter VI and Letter XXIX. Such remarks might be admissible for atmosphere in the classroom through the transient medium of the spoken word. The tone of these witty notes is quite in keeping in editing the epigrams of Martial, where our editor makes effective use of this style in his edition of that writer (Prentice-Hall, 1931).

C. E. L.

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13. Building Rome

SHIPLEY, FREDERICK W.

Agrippa's building activities in Rome. St. Louis, Washington University, 1933. 97p.

This monograph is a continuation of a paper published by the American Academy in Rome in 1931 which dealt with the building operations of certain Roman officials other than Augustus and Agrippa. In the present work Shipley surveys the building operations of Marcus Vipsanius Agrippa from 33 B.C. to his death in 12 B. C. under the four heads of (1) sewers and acqueducts; (2) the Pantheon and other buildings in the Campus Martius in the wide bend of the Tiber; (3) the Porticus Vipsania finished by his sister and containing his famous map of the Empire, together with the other buildings lying west of the Pincian hill; and (4) several miscellaneous works, especially the Horrea Agrippiana, "the granaries of Agrippa," lying between the Palatine hill and the Tiber.

Shipley rightly considers Agrippa as next to Augustus himself in the building of Rome, and the statement of Augustus is literally true as quoted by Suetonius, Divus Augustus, 28.3: Urbem neque pro maiestate imperii ornatam et inundationibus incendiisque obnoxiam excoluit adeo ut iure sit gloriatus marmoream se relinquere, quam latericiam accepisset. "The city, built neither in proportion to the greatness of the Empire and ruined by floods and fires, he rebuilt so that rightly he boasted that he was leaving it of marble which he had found of brick."

The monograph gives adequate descriptions of the several monuments with full references to the literary sources, ancient and modern, accompanied by a sketch map and three plans. It is number four in the series of which number three was "Papers on Classical Subjects" in memory of John Max Wulfing, benefactor of Washington University.

C. E. L.

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14. New York

MITCHELL, L. P. AND LAMBERT, CLARA

Manhattan, now and long ago. N.Y., Macmillan, 3.50.

Mrs. Mitchell and Mrs. Lambert, the authors live in New York and have worked together at the City and Country School and in the Bureau of Educational Experiment. Mrs. Mitchell wrote the "Here and Now Stories."

This book includes stories of 100 years ago, 300 years ago, stories of Indians before the coming of the white man and present day stories of New York.

Ten interesting trips on Manhattan are planned with detail enough to include subways, elevated and surface railway directions.

Fascinating facts are made vivid by the telling.

Intended for children from 9 to 12. Will be useful as collateral reading in history and geography.

R. E. C.

TEXTBOOKS

15. The Social Sciences

JONES, O. G.

Senior manual for group leadership, an instant use guide to parliamentary procedure with lessons. New York, D. Appleton-Century company. c1934. 124p. and 24p manual.

JONES, O. G.

Junior manual for group leadership; an instant use guide to parliamentary procedure with lessons. . . . D. Appleton-Century. c1934. 83p. and 36p manual.

An ingenious device for studying rules of order has been developed by the professor of political science in the University of Toledo. A visible index scheme similar to that employed in office equipment comprises the center signatures of each booklet and enables the user to find correct procedures immediately for entertaining motions to adjourn, lay on the table, amend, et al.

LAPP, J. A., AND ROSS, A. F.

Economic citizenship. D. C. Heath and company, 1934. 305p. $1.16.

An excellent book for a half year's course in economics in the eighth grade.

O. C. A.

THOMAS, H. C., AND HAMM, W. A.

Modern Europe. New York, Henry Holt and company, 1934. 832p.

Two New York City high school history teachers fulfill their wish to write a textbook which will include the material they consider essential. Topically, rather than chronologically arranged, the material is organized around the "outstanding features of contemporary civilization." L. S.

16. Language and Literature

VEIT, BENJAMIN.

Thinking, speaking and writing . . . . New York, Silver, Burdett and company, c 1934. Third year, first half, with Benedict Fox, 102 p., $0.55; third year, second half, with Benedict Fox, 118 p., $0.56; fourth year, first half, with Stella M. Sweeting, 148 p., $0.60; fourth year, second half, with Stella M. Sweeting, 146 p., $0.60; fifth year, first half, with Lula V. Sheehan, 146 p., $0.60; fifth year, second half, with Lula V. Sheehan, 147 p., $0.60; sixth year, first half, with Maximillian J. Lustgarten, 175 p., $0.68; sixth year, second half, with Maximillian J. Lustgarten, 175 p., $0.68.

A thoughtfully planned series of language books, each book resulting from the combined authorships of a school superintendent and a teacher in each of the respective grades. Especially commendable is the attempt to present illustrative material adjusted to the growing pupil's mental development. The teaching of oral and written expression is so vital a part of the school program that officials are urged to consider this series before selecting language texts for the grades concerned.

STRONG, L. A. G. AND REDLICH, MONICA.

Life in English literature; being an introduction for beginners . . . edited for American schools, with suggested readings, bibliographies, and problems, for study and discussion, by Russell Thomas. . . . Boston, Little, Brown, and company, 1934. 547 p. $1.72.

This makes live, human beings out of Shakespeare, Pope, Swift, and the other immortals who only too often suffer in the eyes of high school pupils because of the distance class exercises lend to normally familiar experiences.

HALLECK, REUBEN POST

The romance of American literature . . . illus. by John Ushler . . . New York, American book company, c1934. 388 p.

A readable, introductory high school text certain to stimulate in the pupil an active desire to become better acquainted with certain of our American authors. Biographies of contemporaries are a notable feature.

TINKER, HAROLD L., COMP.

Essays—yesterday and today . . . frontispiece by George M. Richards, . . . New York, Macmillan company, c1934.

A balanced selection of English and American essays intended to assist teacher and student with the "formidable" study of that literary form most frequently associated with the ordeal of Burke's Conciliation speech. Happily, that most unfortunate oratorical masterpiece is omitted. Instead, contemporaries like Max Beerbohm, Heywood Broun, Knute Rockne, Stark Young help to make the efforts of Bacon, Lamb, DeQuincy, Thoreau, respectable in the eyes of our secondary students.

McIlwraith, A. K.

Five Elizabethan comedies . . . London, Oxford university press, (1934) 308 p. $0.80.

Those included are Lyly's *Campaspe*, Peele's *Old wives tale*, Greene's *Friar Bacon and Friar Bungay*, Dekker's *Shoemaker's holiday*, and the anonymous *Merry devil of Edmonton*. It was the volume entitled *Restoration tragedies*, a companion to the present opus in the World's Classics series, which first stimulated interest in the Restoration drama for many readers, and no doubt *Five Elizabethan comedies* to excellent dramatists like Greene and Dekker who receive only passing mention in the average college survey course.

Fowlkes, John Guy, and Young, Chas. E.

Instructional Tests in French. Boston, Houghton Mifflin Company [c1933]. $0.68.

"*Instructional Tests in French*," say the authors, "have been prepared as test and study material supplementary to the regular textbook that is used. The tests are based upon the findings and recommendations of the Modern Language Investigation (*sic*). The first five hundred words of the Henmon-Vander Beke French Word Lists constitute the basis for the vocabulary work. In like fashion, the work in idioms is based upon the work of Cheydleur. The work in pronunciation has been developed by one of the authors out of some twenty years' experience in the teaching of French. The work in grammar is organized in keeping with current practice, but is limited to fundamentals rather than being all inclusive."

The book contains 120 pages (size 8½ by 11 in.) of tests of various types: multiple choice, completion, disarranged sentence, translation, matching, and the like. The pages are detachable, and are punched for notebook insertion. A sixteen-page key to the tests (also detachable) is included. M. L. S.

Graded objectives for teaching good American speech. Contributors: Elizabeth A. Douris, Katherine L. O'Connell, Gertrude Proudman . . . Adelaide Boers, Helen R. Dalton, Fannie E. Daniels, Jeannette I. Molloy, Sadie A. Padley . . . Sophie A. Pray . . . New York, E. P. Dutton & co., inc., c1934. 87 p.

Not only is this little book an aid to improving the speech of the "average" boy and girl, but in addition it affords valuable material for treating speech defects like lisping.

Wood, Alice L.

The jingle book for speech correction . . . with a foreword by Letitia Raubicheck . . . New York, E. P. Dutton & co., inc., publishers, c1934. 115 p.

Prose and verse exercises intended to aid stammerers to overcome their speech defects.

Gaston, C. R., Chapin, A. F. and Nagelber, M. J.

English in daily life. Boston Ginn and company c 1934

A high school English text designed "to meet all the ordinary social needs of . . . pupils in the use of language . . ."

Baker, Clara Belle and Reed, Mary Maud

The Curriculum readers. Indianapolis, Bobbs-Merrill, [c 1934]

Pre-primer, *Playmates*, 56p.; primer, *Friends for every day*, 155p.; first reader, *Friends in town and country*, 192 p.; second reader, *Friends here and away*, 262p.; third reader, *Friends around the world*, 335p.;

Manual for preprimer playmates and primer friends for everyday, 227p.

"The purpose of the Curriculum Readers is to provide reading material closely related to the children's activities and experiences at each age level and to the various units of work that usually forms the modern curriculum."

LYMAN, R. L. AND OTHERS

Daily-life language series: Introductory book, 248p.; *Book one*, 391p.; *Book four*, 485p.; *Book Three*, 533p. Boston, Ginn and company 1934

". . . a complete, cumulative program in language study for grades two through eight . . ."

BURTON, HARRY EDWIN, AND GUMMERE, RICHARD MOTT.

Latin—fourth year . . . New York, Silver, Burdett and Company, c 1931. 439p. + 105. $1.88.

This fourth book is designed, as the editors claim, to assist in understanding Latin as literature as well as language and in feeling some of this influence upon our own speech and literature. Latin poetry deemed sufficient for the secondary schools is offered, the importance of the selections ranging from Vergil's Aeneid through Catullus, Horace, Ovid, Tibullus, Martial, Phaedrus, and miscellaneous quotations. Poetic technique and appreciation are amply discussed in the introduction. Intelligent help to students is directly supplied on the page under the Latin text in words for progressive vocabulary and in notes for immediate use. Illustrations and good format add much to this attractive book. Are texts without notes provided for class use in recitation? C. E. L.

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17. Science and Mathematics

JEAN, F. C., HARRAH, E. C., HERMAN, F. L.

An introductory course in science for colleges: I, Man and the nature of his physical universe; II, Man and the nature of his biological world . . . with the editorial collaboration of Samuel Ralph Powers . . . Boston, Ginn and company, c1934. 2 v. v. 1, $2.20; v. 2, $2.40.

Excellent orientation texts for the freshman survey courses which are everywhere appearing as part of new college plans.

FREILICH, AARON, SHANHOLT, H. H., MCCORMACK, J. P.

Intermediate algebra . . . New York, Silver, Burdett and company, c1934. 406 p. $1.40.

FREILICH, AARON, SHANHOLT, H. H., MCCORMACK, J. P.

Plane trigonometry . . . New York, Silver, Burdett and company, c1934. 293 p. $1.32.

Progressive school systems looking for senior high school mathematics texts will do well to consider these two carefully planned, and intelligently organized books prepared by three New York mathematics teachers.

HART, WALTER W.

Progressive first algebra . . . Boston, D. C. Heath and company, c1934. 408 p. $1.28.

WELLS, WEBSTER, AND HART, WALTER W.

Progressive second algebra . . . Boston, D. C. Heath and company, c1934. 298 p. $1.32.

Distinctive in these texts are the devices to provide for individual differences.

BETZ, WILLIAM.

Junior mathematics for today: Book two, . . . Boston, Ginn and company, c1934. 438 p. $0.96.

Extends and completes arithmetic and geometry work begun in Book one, and introduces algebra. Humanizes a subject which has always had an inhuman reputation.

HAMLEY, HERBERT RUSSELL.

Relational and functional thinking in mathematics . . . New York, Teachers college, Columbia university, 1934. 215 p. (The National council of teachers of mathematics. The ninth yearbook.)

In recognition of the tendency in American schools to organize the work in mathematics around the funtion idea, the psychology, history, and educational relations of the concept are treated.

SMITH, J. CAMPBELL.

A higher school chemistry . . . London, The Grant educational co., Ltd., 1934. 375 p.

Intended to cover the work for the English School Certificate.

FREILICH, AARON, SHANHOLT, H. H., MCCORMACK, J. P.

Fusion mathematics; a correlation and unification of intermediate algebra and plane trigonometry . . . New York, Silver, Burdett and company, c. 1934. 600 p. $1.84.

Synthesis of various high school mathematics courses heretofore artificially separated is effectively accomplished.

HUNTER, GEORGE W., AND KITCH, LORAN W.

Master tests in biology: Set X . . . New York, American book company, c1934.

Presented almost in game form and therefore certain to appeal to pupils. .

SEYMOUR, F. EUGENE AND POOLE, HALLIE S.

A unit workbook in plane geometry . . . New York, Macmillan company, 1934. 126 p. $0.40.

Based on the theorems found in the plane geometry syllabuses set by the College Entrance Examination Board and the New York State Board of Regents.

PEABODY, JAMES EDWARD.

Work-test book to accompany the new edition Biology and human welfare. New Work, Macmillan company, 1934. 158 p. $0.40.

Furnishes an effective syllabus for class work.

MANK, HELEN GARDNER

The living world; an elementary biology. New York, Benj. H. Sanborn & Co., c.1933. 673p.

A Textbook for high school students. Written in a lively style. Sentences are short, questions are numerous, and unfamiliar words are defined in a glossary. Aids for the teacher and independent student are abundant and suggestive. Laboratory and field exercises occur where the matter of the text suggests them. The organization is in large units whose order may be rearranged to meet various conditions. The writer is head of the biology department of the Lawrence, Massachusetts High School.

F. R. B.

POWERS, S. R., NEUNER, E. F., AND BRUNER, H. B.

The world around us. Boston, Ginn and Company, 1934. 475p. $1.20.

The first of a set of three in a series entitled "A Survey of Science for Junior High Schools." Organized in eight units and twenty-three large topics, the style is distinctly conversational, the illustrations of activity, and the purpose to develop interest, understanding, and "the scientific attitude." H. A. W.

MCCORKLE, PAUL, AND LEWIS, J. A.

College physical science. Philadelphia, P. Blakiston's Sons and Company, 1934. 327p. $2.00.

Twenty-three chapters of carefully selected material, in which principles are explained in elementary fashion, providing distinct background for formal courses in physics and chemistry, and factual material for prospective teachers of general science.

H. A. W.

PARSONS, T. R.

Fundamentals of biochemistry. Baltimore, William Wood and Company, 1933. 435p.

A scholarly British biochemist revises his work of a decade ago, in the "endeavour that every word—nay, even every comma—shall contribute its share of exactness to the account I have given to the present achievement of our science." Detailed, methodical, excellent reference.

H. A. W.

COWLEY, ELIZABETH BUCHANAN.

Plane geometry. New York, Silver, Burdett and Company, [c1932]. 368p.

A text which recognizes the fact that the fundamental obstacle to overcome is inability on the part of the pupil to read intelligently. Geometry becomes a living subject with human interest in this well-written volume by a former Vassar professor.

Champion arithmetics, by Joseph C. Brown, Helen Cook Mirick, J. Freeman Guy, and Albert C. Eldredge; illus. by Nell Hukle Compton and Donald J. Mills. Evanston, Ill., Row, Peterson and company, 1934.

Book I,	510p.	$.80.
Book II,	512p.	$.84.
Book III,	543p.	$.88.

Together these three texts carry the child through simple algebraic equations with interesting illustrations from child life. The indexes in each volume are unusually good. good.

Fun with numbers, by Joseph C. Brown, Helen Cook Mirick, J. Freeman Guy, and Albert C. Eldredge; illus. by Nell E. Huckle. Evanston, Ill., Row, Peterson and company [1931]. 152p. $.68.

A second grade reader-arithmetic that employs child life as a motivating interest.

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18. In Brief

CHERRINGTON, B. M.

Methods of education in international attitudes. Teachers College, Columbia University, 1934. 123 p. (Contribution no. 595.) $1.50.

Based on the experiments conducted by the Foundation for the Advancement of the Social Sciences of the University of Denver.

PETERSON, A. G.

The training of elementary and secondary teachers in Sweden. Teachers College, Columbia University, 1934. 110 p. (Contribution no. 575.) $1.75.

An important contribution to the literatures of comparative education and teacher training.

KOLSTAD, ARTHUR

A study of opinions on some international problems as related to certain experiences and background factors. New York, Teachers college, Columbia university, 1933. 95 p. (Contribution no. 555.) $1.50.

Based on the results obtained by questionnairing 500 Teachers College students with 75 statements selected from H. R. Harper's Questionnaire.

DANIEL, R. P.

A psychological study of delinquent and non-delinquent negro boys. New York, Columbia university, 1.50.

This is a dissertation in which various character and personality tests are tried. There is something of a critical evaluation of these measures, a very desirable feature of the study. It is a significant contribution to the study of the characteristics of problem children.

Some Code Controls of School Building Construction in American Cities. By John W. Sahlstrom. Bureau of Publications, Teachers College, Columbia University, New York City. 1933. pp. 153.

This study is a careful analysis of the effects of municipal building codes on the safety of occupants, educational efficiency, and economical construction of school buildings. R. L. H.

School Publicity. By Belmont Farley. Stanford University Press, Stanford University, California. 1934. pp. 118.

Every school official should be familiar with this well-illustrated book on what and how to tell the public about the schools. R. L. H.

Support of State Educational Programs by Dedication of Specific Revenues and by General Revenue Appropriations. By William I. Pearman. Bureau of Publications, New York City. 1933. pp. 141.

This study compares the relative merits of financing state educational programs by Teachers College, Columbia University, "ear-marked" revenues or by appropriations from a general fund. The author is of the opinion that the former is safer in many states, but considers the latter plan more desirable in states realizing the importance of education and having a sound budgetary policy. R. L. H.

Desirable Physical Facilities for an Activity Program. By Frank M. Long. Bureau of Publications, Teachers College, Columbia University, New York City. 1933. pp. 116.

This study is a review of the activity program and an analysis of the plant facilities of twenty progressive schools.

R. L. H.

Rural Adult Education. By Benson Y. Landis and John D. Willard. New York: The Macmillan Company. 1933. pp. xiii, 229.

An excellent book, giving a brief interpretation of the significance of rural life and resumès of the principle movements for the education of rural adult groups. The treatment is concise, with specific stories of what is being done. If there is a weakness, it is in failure to emphasize the work of the school in preparing its graduates to continue their mental growth by conscious effort for their own education as adults, and through the carry-over from an effective curriculum for children to adult groups. N. F.

GEE, WILSON.

American farm policy. New York, Norton.

A very brief discussion of our American agricultural policy with particular emphasis placed on our policy since the World War. The book is worth reading. O. C. A.

GEIGER, A. J.

The six-year high school, Nashville, Tenn., Peabody College. (Peabody contributions to education.)

This is an evaluation of the aims, purposes, functions and objectives of the six-year high school on a nation-wide basis. After compiling all the claims for the six-year high school, made by the authorities in the field, the writer arranged them in a check-list and sent them to selected list of principals of six-year high school to see how closely "claims" and "practices" agreed. It is a carefully planned and well executed piece of research on the six-year high school.

MEYER, A. M.

History of the Southern Association, Nashville, Peabody College, 1934. (Peabody contributions to education.)

In developing this volume the writer has traced very carefully the long story of the growth and development of the Association. He outlines the problems it had to face and overcome; the handicaps it faced; the services it rendered; and the victories it won. It is a clear-cut piece of historical writing which presents in interesting form the record of thirty-seven years of growth and service of one of the great regional standardizing agencies.

GOULDING, R. L.

The development of teacher training in Florida, Nashville, Peabody College, 1934. (Peabody contributions to education.)

This is a historical treatise dealing with the gradual rise and development of teacher training in Florida from territorial days to the present. It includes such topics as: The rise of the state superintendent of public instruction; various and sundry legislative acts bearing on certification of teachers; the rise and disappearance of the Normal Schools; Summer Schools; Chautauquas; etc. A valuable document in understanding the history and present status of teacher training in the commonwealth.

WISE, J. H.

Organization and administration of extra-curricular activities in the large high school of the Southern Association. Nashville, Peabody College, 1934. (Peabody contributions to education.)

As the title indicates this is a study of the organization and administration of the extra-curricular activities in large high schools. The investigation is concerned with such topics as: programs of activities; duties and activities of sponsors; time and place of meetings; aids and hinderances to programs; and outcomes desired. The study includes the 187 high schools in the Southern Association that enroll over 500 pupils.

COLEMAN,

A Children's Symphony. New York, Lincoln School of Teachers College, Columbia University, 1934.

This is a very interesting story, but it

advocates that children are to play on inferior instruments. It will also give to the children the idea that music is "playing," instead of leading the children to have respect for music and like the best music. "Creative music" from the children stunts the music education, and will crowd out the use of standard good music.

D. R. G.

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19. Received

AYER, JEAN Y.

The picnic book; pictures by Maude and Miska Petersham New York Macmillan 1934

BROWN, ROBERT AND THORP, MARY TUCKER

Directed geography study, book three: world interdependence . . . Yonkers-on-Hudson N.Y. World book company 1934

CARPENTER, FRANCES

Our neighbors near and far; my geography workbook. New York American book co. 1934

OVERTON, BRUCE

Work test book to accompany the Nations at work. New York Macmillan 1934 $.40

SEAVER, CHARLES H.

Civics of today; a workbook for the study of community services and organization local, state, and national. Chicago, Benj. H. Sanborn & Co., 1934

SHEPHERD, LOU A. AND BENNETT, ELIZABETH HART

A workbook for use with the Pathway to reading, primer and first readers. New York, Silver, Burdett and company 1934

Story and study readers: My treasure box work book, illus. by Marjorie Hartwell; *My trips to take,* illus. by Violet Moore Higgins; *My friends to make,* illus. by Marjorie Hartwell; *My playfellows,* by Ralph N. Tirey and Mary Daily Black. Richmond Johnson publishing company 1934

EDUCATION IMPRINTS

A Bimonthly Checklist of Education Publications, Arranged Alphabetically by Author

JULY 1-SEPTEMBER 1, 1934

Abelow, Samuel P.

Dr. William H. Maxwell, the first superintendent of schools of the city of New York. 177p. (2p. bibl.) il. (pors.) D [c. '34] B'klyn, N.Y., Scheba Pub. Co., 1.50

Bagley, William Chandler

Education and emergent man. 252p. (bibls.) D (Nelson educ. ser.) c. N.Y., Nelson 2.00

Bartlett, Willard W.

Education for humanity; the story of Otterbein College. 285p. (3p. bibl.) il., diagrs.) O c. Westerville, O., Otterbein College 1.50

Bossard, James Herbert Siward

Social change and social problems. 798p. (bibls.) O (Harper social sci. ser.) c. N.Y., Harper 3.50

Bryson, Lyman

A state plan for adult education. 69p. D [c. '34] N.Y., Amer. Ass'n for Adult Educ. pap., .50

Burton, William Henry

Introduction to education. 847p. (bibls.) diagrs. O (Appleton ser. in supervision and teaching) [c. '34] N.Y., Appleton-Century lea. cl., 3.00

Clark, Felton G.

The control of state-supported teacher-training programs for Negroes. 119p. (3p. bibl.) (Contribs. to educ., no.605) c. N.Y., Teachers Coll., Columbia Univ. 1.50.

Clarke, Helen

The professional training of the hospital dietitian. 99p. (2p. bibl.) maps, diagr. O (Contribs. to educ., no. 602) c. N. Y., Teachers Coll., Columbia Univ. 1.50

Cost of going to college. 24p. (Office of Educ. pamphlet no. 52) '34 Wash., D.C., Gov't Pr. Off.; Sup't of Doc. pap., .05

Cox, Philip Wescott Lawrence and Langfitt, R. Emerson

High school administration and super-

vision. 708p. (bibls.) diagrs. D (Amer. educ. ser.) [c. '34] N.Y., Amer. B'k 3.00

Cubberley, Ellwood Patterson

Readings in public education in the United States; a collection of sources and readings to illustrate the history of educational practice and progress in the United States. 552p. il., diagrs. D [c. '34] Bost., Houghton 2.50

Deyoe, George P.

Certain trends in curriculum practices and policies in state normal schools and teacher colleges. 110p. (8p. bibl.) O (Contribs. to educ., no. 606) c. N.Y., Teachers Coll., Columbia Univ. 1.50.

Douglass, Aubrey Augustus

The American school system; a survey of the principles and practices of education. 491p. (bibls.) il., diagrs. O '34 N.Y., Farrar & Rinehart. 2.50.

Eakin, Mildred Moody

Teaching junior boys and girls; a textbook in the Standard Course of Leadership Training, outlined and approved by the International Council of Religious Education. 277p. (bibls.) S [c. '34] N.Y., Methodist B'k. 1.10.

Fair, Ethel M., ed.

Countrywide library service; a compilation of articles on service organized by counties and other large units. 208p. (bibls.) O '34 Chic., Amer. Lib. Ass'n. 2.50.

Freeman, Graydon La Verne

Introduction to physiological psychology. 597p. il. D (Psychology ser.) '34 N.Y., Ronald Press. 4.50.

Gehrkens, Karl Wilson

Music in the grade schools (grades 1-6). 233p. D (Laurel lib.) [c. '34] Bost., C. C. Birchard & Co. 2.00.

Gooch, Wilber I.

Junior high school costs. 169p. (bibl. footnotes) O (Contribs. to educ., no. 604) c. N.Y., Teachers Coll., Columbia, Univ. 1.75.

Griggs, Edward Howard

The story of an itinerant teacher. 231pp. D [c. '34] Ind., Bobbs-Merrill. 1.50.

Gustin, Margaret and Hayes, Margaret L.

Activities in the public school. 290p. (bibls.) il. D c. Chapel Hill, Univ. of N. C. Press. 2.00.

Helser, Albert D.

Education of primitive people; a presentation of the folklore of the Burd animists with a meaningful experience curriculum. 361p. (11p. bibl.) il. D [c. '34] N.Y., Revell. 3.00.

Jack, Lois M. and others

Behavior of the preschool child. 171p. (bibls.) diagrs. O (Univ. of Ia. studies in child welfare, v.9, no. 3; new ser. no. 275). '34 Iowa City, Univ. of Ia. 1.70; pap., 1.35.

Kefauver, Grayson N. and others

Horizontal organizations of secondary education. 281p. (bibl. footnotes) il. (Office of Educ. bull., 1932, no. 17; Nat'l Survey of Secondary Educ. monograph 2.) '34 Wash., D.C., Gov't Pr. Off.; Sup't of Doc. pap., .20.

Leary, Daniel Bell

Educational psychology; an application of modern psychology to teaching. 377p. (6p. bibl.) O (Nelson educ. ser.) c. N. Y., Nelson. 2.50.

Maller, J. B.

Character and personality rating scale. no p. diagr. O c. '34 N.Y., Teacher Coll., Columbia Univ. pap., .25.

Morrison, Henry Clinton

Basic principles in education. 456p. (bibls.) O [c. '34] Bost., Houghton. 2.50.

Newburn, Harry K. and others

Doctoral theses in education, 2. 122p. (bibls.) O (Univ. of Ia. studies in educ., v. 9, no. 3; new ser. no. 272) '34. Iowa City, Univ. of Ia. pap., apply.

Our public schools. 217p. (bibls.) il. S [c. '34] Wash., D. C., Nat'l Congress of Parents and Teachers. pap., .50.

Partridge, E. De Alton

Leadership among adolescent boys. 118p. (7p. bibl.) diagrs. O (Contribs. to educ., no. 608) c. N.Y., Teachers Coll., Columbia Univ. 1.50.

Proceedings of Association of American Universities, 1933; v. 35. 140p. O c. '34 Chic., Univ. of Chic. Press. pap., 1.00.

Roehl, Louis M.

Shop management in rural high schools. 96p. il. O '34 Milwaukee, Bruce. 1.00.

Sauvain, Walter Howard

A study of the opinions of certain professional and non-professional groups regarding homogeneous or ability grouping. 159p. (6p. bibl.) O (Contribs. to educ., no. 596) c. N.Y., Teachers Coll., Columbia Univ. 1.75.

Smith, James Gerald

Elementary statistics; an introduction to the principles of scientific methods.

527p. (bibl. footnotes) maps, diagrs. O [c. '34] N.Y., Holt. 3.50.

[Thomas, Edith, and Barcus, T. R., comps.]

Alumni reading lists, second ser.; prepared with the aid of members of the faculties of the University of Michigan. 220p. O '34 Ann Arbor, Univ. of Mich. Press. pap., 1.25.

Thorndike, Edward L., and others

Comparative psychology. 529p. (bibl.) diagrs. D (Prentice-Hall psych. ser.) '34 N.Y., Prentice-Hall. 3.50.

Trabue, M.R., and Dvorak, Beatrice J.

A study of the needs of adults for further training. 25p. Q (Employment Stabilization Research Inst. ser., v. 3, no. 3) '34 Minneapolis, Univ. of Minn. Press. pap., .50.

Wayman, Agnes Rebecca

Education through physical education; its organization and administration for girls and women; 3rd ed., rev. 378p. (bibl.) il., diagrs. O '34 Phil., Lea & Febiger. 4.00.

Weis, Ezra H. F.

The music preparation of elementary teachers in state teachers colleges; a study limited to teachers below the seventh grade in five mid-western states; Colorado, Kansas, Missouri, Illinois, and Kentucky. 110p. (6p. bibl.) map O (Contribs. to educ., no. 599) c. N.Y., Teachers Coll., Columbia Univ. 1.50.

Williams, Jesse Feiring, M.D., and Brownell, Clifford Lee

Administration of health and physical education. 598p. il. '34 Phil., Saunders. 3.00.

Wilson, Lester M. and Kandel, Isaac Leon

Introduction to the study of American education. 335p. (bibls.) D (Nelson educ. ser.) c. N.Y., Nelson. 2.00.

Yoakam, Gerald A. and Simpson, Robert G.

Introduction to teaching and learning. 509p. D '34 N.Y., Macmillan. 2.50.

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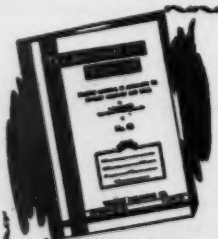

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